2.7 HGCWD's Authority. HGCWD is also a local agency qualified to become a GSA because HGCWD is a county water district formed and operating pursuant to and in accordance with Division 12 of the California Water Code that manages water, has a water supply and overlies a portion of the Sub-Basin.

2.8 Corona's Election to Join GSA. On March 15, 2017, Corona held a public hearing to determine whether to become a GSA, and adopted Resolution No. 2017-013, electing to jointly become a GSA with Norco and HGCWD, a copy of which (without exhibits) is attached hereto as **Exhibit "A-1"** attached hereto and incorporated herein by reference.

2.9 Norco's Election to Join GSA. On March 15, 2017, Norco held a public hearing to determine whether to become a GSA, and adopted Resolution No. 2017-12, electing to jointly become a GSA with Corona and HGCWD, a copy of which is attached hereto as **Exhibit "A-2"** attached hereto and incorporated herein by reference.

2.10 HGCWD's Election to Join GSA. On March 23, 2017, HGCWD held a public hearing to determine whether to become a GSA, and, by minute action, elected to jointly become a GSA with Corona and Norco.

2.11 Submission of Notice of Decision. Corona, Norco and HGCWD will jointly submit a Notice of Decision to form and be the founding Parties of a GSA, which will cover the Sub-Basin as shown on the map in **Exhibit "B-1"** attached hereto and incorporated herein by reference.

2.12 Boundaries of Sub-Basin. Additional detail identifying boundaries of the Parties and agencies covering the Sub-Basin is shown on the map attached as **Exhibit "B-2"** attached hereto and incorporated herein by reference.

2.13 Preparation of Groundwater Sustainability Plan for Sub-Basin. The Parties will work collaboratively with other interested agencies to develop and implement a Groundwater Sustainability Plan ("**GSP**") to sustainably manage the Sub-Basin pursuant to SGMA.

2.14 Corona Utility Authority. The Parties to this MOU understands that Corona has entered into a Water Enterprise Management Agreement and a Wastewater Enterprise Management Agreement, both dated as of February 6, 2002, with the Corona Utility Authority ("CUA") for the maintenance, management and operation of those utility systems (collectively, the "Corona Management Agreements"). To the extent that this MOU is deemed to be a "material contract" under either of the Corona Management Agreements, Corona enters into this MOU on behalf of the CUA and subject to the terms of the applicable Corona Management Agreement(s).

3. TERMS.

3.1 Purpose. This MOU is entered into by and between the Parties to facilitate a cooperative and ongoing working relationship that will allow compliance with the SGMA and other applicable State law, both as may be amended from time to time.

3.2 Temescal Sub-Basin Groundwater Sustainability Agency. The Parties hereby establish the Temescal Sub-Basin Groundwater Sustainability Agency ("**Temescal GSA**") to manage the portion of the Sub-Basin as set forth in Exhibit **"B-1"** attached hereto and incorporated herein by reference.

3.3 Additional Agencies. Additional agencies with service area boundaries outside the jurisdiction of the Parties may join and incorporate their service area boundaries or portions thereof into the Temescal GSA upon the mutual consent of all Parties. The additional agencies will be added to **Exhibit "C-1"** attached hereto and incorporated herein by reference, as amended from time to time in compliance with SGMA, and the boundaries of the Temescal GSA may be expanded accordingly.

3.4 Powers. In addition to any other action available to develop and implement the SGMA, including a GSP, the Temescal GSA may perform the following functions:

A. Adopt standards for measuring and reporting water use.

B. Develop and implement policies designed to reduce or eliminate overdraft within the boundaries of the GSA.

C. Develop and implement conservation best management practices.

D. Develop and implement metering, monitoring and reporting related to groundwater pumping.

E. Exercise any and all powers described in Part 2.74 of Division 6 of the Water Code, the Sustainable Groundwater Management Act.

3.5 Decision Making Process.

3.5.1 Majority Vote Required. Each party shall have one vote through its representative designated pursuant to Section 3.7 of this MOU. With the exceptions noted herein, it is the preference of the Parties that actions undertaken by the Temescal GSA are done by unanimous consent of the Parties; however, if unanimous consent is not possible, a majority vote of all then current Parties to this MOU is required.

3.5.2 Impasse Procedures. In the event of an impasse or disagreement where a majority vote cannot be reached, the Parties shall use their best efforts to find a mutually agreeable result. To this effect, the Parties shall consult and negotiate with each other in good faith in an attempt to reach a solution that is mutually satisfactory. If the Parties do not reach a solution that is acceptable to a majority of all then current Parties to this MOU, then the matter shall be submitted to non-binding arbitration or mediation within a reasonable period of time.

3.6 Roles and Responsibilities of the Parties.

A. Corona shall have the primary responsibility to develop a GSP within the boundaries of the Temescal GSA and submit the GSP to the California Department of Water Resources ("**DWR**") for review and evaluation. Corona shall also have the primary responsibility to prepare and submit the annual and five year reports to DWR pursuant to SGMA and DWR's implementing regulations.

B. The Parties will work jointly to fulfill the purpose of this MOU within the boundaries of the Temescal GSA.

C. The Parties will meet regularly to discuss SGMA, GSP development and implementation activities, assignments, and ongoing work progress.

D. The Parties may form committees as necessary from time to time to discuss issues that impact the Temescal GSA.

E. Corona is responsible for implementing the GSP in areas of the Temescal GSA that are within Corona's service area boundaries and within Corona's sphere of influence.

F. Norco is responsible for implementing the GSP in areas of the Temescal GSA that are within Norco's service area boundaries.

G. HGCWD is responsible for implementing the GSP in areas of the Temescal GSA that are within HGCWD's service area boundaries.

3.7 Designation of Representatives.

3.7.1 Corona's Representative. Corona hereby designates Tom Moody, or his or her designee, to act as its representative for the performance of this MOU ("Corona's Representative"). Corona's Representative shall have the power to act on behalf of the Corona for all purposes under this MOU. Corona's Representative may be changed at any time by providing notice to the other Parties pursuant to Section 3.12.

3.7.2 Norco's Representative. Norco hereby designates Chad Blais, or his or her designee, to act as its representative for the performance of this MOU ("Norco's Representative"). Norco's Representative shall have the power to act on behalf of the Norco for all purposes under this MOU. Norco's Representative may be changed at any time by providing notice to the other Parties pursuant to Section 3.12.

3.7.3 HGCWD's Representative. HGCWD hereby designates David Vigil, or his or her designee, to act as its representative for the performance of this MOU ("HGCWD's Representative"). HGCWD's Representative shall have the power to act on behalf of HGCWD for all purposes under this MOU. HGCWD's Representative may be changed at any time by providing notice to the other Parties pursuant to Section 3.12.

3.8 Funding. Unless agreed to otherwise, each Party's participation in this MOU is at its sole cost and expense. Each Party shall be financially responsible for collecting data or information from within that Party's service area that is required to be provided for development of the GSP. Norco and HGCWD shall not incur any financial expense related to development of the GSP and submittal of the GSP to the DWR.

3.9 Term and Termination. This MOU shall remain in effect unless terminated by the mutual written consent of the Parties. Any Party may elect to withdraw its participation in the Temescal GSA by providing sixty (60) days' written notice to the other Parties. Additionally, the Parties may mutually agree to terminate this MOU and instead enter into a joint powers agreement pursuant to the Joint Exercise of Powers Act, Government Code Section 6500 *et seq*. for the purpose of creating a separate public agency to serve as the Temescal GSA and carry out all obligations and exercise all powers under SGMA.

3.10 Amending the MOU. This MOU and Exhibits hereto may only be amended by a subsequent writing, approved and signed by all Parties.

3.11 Hold Harmless and Mutual Indemnification. No Party, nor any officer or employee of a Party, shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by another Party under or in connection with this MOU. Each Party shall defend, indemnify and hold harmless the other Parties and their elected officials, officers, agents and employees from and against any and all claims, demands, judgments or liabilities arising from any and all alleged acts or omissions of the indemnifying Party and its elected officials, officers, agents and employees during those times when said elected officials, officers, agents and employees are acting in connection with this MOU.

3.12 Notices. Except as otherwise expressly provided by law, any and all notices or other communications required or permitted by this MOU to be served on or given to a Party to this MOU shall be in writing and shall be deemed duly served or given when personally delivered to the Party to whom it is directed or to any managing or executive officer or director of that Party. In lieu of personal service, all notices or other communications shall be deemed duly served when sent via electronic mail or when deposited in the United States mail, first class postage prepaid, addressed as follows:

If to Corona:
City of Corona
Attn: Department of Water and Power, General Manager
755 Public Safety Way
Corona, CA 92882
E-mail: Tom.moody@ci.corona.ca.us

If to Norco:
City of Norco
Attn: Public Works Director
2870 Clark Avenue
Norco, CA 92860
E-mail: Cblais@ci.norco.ca.us

If to HGCWD: Home Gardens County Water District
Attn: General Manager
3832 Grant Street
Corona, CA 92879
E-mail: hgcwd@yahoo.com

3.13 Counterparts. This MOU may be signed in counterparts, each of which shall constitute an original.

3.14 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this MOU.

3.15 Entire Agreement. This MOU contains the entire agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements.

3.16 Corona Utility Authority. To the extent that this MOU is deemed to be a "material contract" under either of the Corona Management Agreements, the Parties to this MOU have no right to terminate this MOU, either with or without cause, based upon the existence or non-existence of either or both of the Corona Management Agreements. Therefore, if an applicable Corona Management Agreement expires or terminates for any reason, the Parties to this MOU shall remain fully obligated to perform under this MOU contracting directly with the CUA or another third party contracted by the CUA for the maintenance, management and operation of the applicable utility system.

[SIGNATURES ON FOLLOWING 3 PAGES]

CORONA'S SIGNATURE PAGE FOR

MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

CITY OF CORONA

By: _____ Dated: 3/15/17
Dick Haley
Mayor

Attest:

By: _____
Lisa Mobley
City Clerk

Approved as to Form:

By: _____
Dean Derleth
City Attorney

Consent:

_____
Darrell Talbert
Executive Director
Corona Utility Authority

NORCO'S SIGNATURE PAGE FOR
MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

CITY OF NORCO

By: _____ Date: March 15, 2017
Greg Newton
Mayor

Attest:

By: _____
Cheryl L. Link, CMC
City Clerk

Approved as to Form:

By: _____
John Harper
City Attorney

HGWD'S SIGNATURE PAGE FOR

MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

HOME GARDENS COUNTY WATER DISTRICT

By: _____ Dated: 3/23/17

David Vigil
General Manager

EXHIBIT "A-1"
TO
MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

CORONA RESOLUTION ON FORMATION OF THE TEMESCAL SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY

[SEE ATTACHED FOUR (4) PAGES]

RESOLUTION NO. 2017-013

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORONA AUTHORIZING THE EXECUTION AND DELIVERY OF A MEMORANDUM OF UNDERSTANDING WITH THE CITY OF NORCO AND THE HOME GARDENS COUNTY WATER DISTRICT FOR THE PURPOSE OF JOINTLY ESTABLISHING AND SERVICING AS THE TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY

WHEREAS, in September 2014, the Governor signed three bills (SB 1168, SB 1319, and AB 1739) into law creating the Sustainable Groundwater Management Act of 2014 ("SGMA"), which generally requires the formation of one or more Groundwater Sustainability Agencies ("GSA") responsible for implementing sustainable groundwater management and preventing "undesirable results" in groundwater basins and sub-basins designated as a medium or high or priority basin by the California Department of Water Resources ("DWR"); and

WHEREAS, DWR has designated the Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin (the "Sub-Basin"), as a medium priority groundwater basin; and

WHEREAS, the City of Corona ("City"), the City of Norco ("Norco") and the Home Gardens County Water District ("HGWD") each overlay a portion of the Sub-Basin and each exercise water management, water supply or land use authority within a portion of the Sub-Basin; and

WHEREAS, under SGMA, a combination of local agencies may elect to form a GSA for all or portions of the Sub-Basin through a memorandum of understanding; and

WHEREAS, the City, Norco and HGWD have negotiated that certain Memorandum of Understanding (Temescal Sub-Basin Groundwater Sustainability Agency) ("MOU") by and between the City of Corona, the City of Norco, and the Home Gardens Water District for the purpose of jointly establishing and servicing as the Temescal Sub-Basin Groundwater Sustainability Agency; and

WHEREAS, the Temescal Sub-Basin Groundwater Sustainability Agency will implement SGMA in the entire Sub-Basin; and

WHEREAS, the City held a public hearing on March 15, 2017 pursuant to California Water Code Section 10723(b), after publication of notice of such hearing pursuant to California Government Code Section 6066.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of

Corona, California, as follows:

SECTION 1. Election to Form GSA. The City of Corona hereby elects, jointly with the City of Norco and the Home Gardens Water District, to become the Temescal Sub-Basin Groundwater Sustainability Agency to serve as the groundwater sustainability agency over the entire Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin pursuant to California Water Code Section 10723.6(a)(2). The Temescal Sub-Basin Groundwater Sustainability Agency shall have all the powers granted to a groundwater sustainability agency pursuant to SGMA. The City, Norco and HGWD will jointly submit to DWR a notice of their decision to form the Temescal Sub-Basin Groundwater Sustainability Agency for the Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin.

SECTION 2. Sub-Basin Boundaries Managed by GSA. The portion of the Temescal Sub-Basin to be managed by the Temescal Sub-Basin Groundwater Sustainability Agency shall be that portion of the Sub-Basin as depicted in Exhibit "A" attached hereto and incorporated herein by reference, which boundary may be modified from time to time.

SECTION 3. Interested Persons. The Temescal Sub-Basin Groundwater Sustainability Agency shall consider the interests of all beneficial users and users of groundwater, as well as those responsible for implementing groundwater sustainability plans, as required by California Water Code Section 10723.2. The Temescal Sub-Basin Groundwater Sustainability Agency shall establish and maintain a list of persons interested in receiving notices regarding preparation of the GSP, meeting announcements, and availability of draft plans, maps, and other documents, as required by California Water Code Section 10723.4.

SECTION 4. Approval of MOU. The City hereby approves the MOU in substantially the form attached hereto as Exhibit "B" and incorporated herein by reference, which provides the governing structure of the Temescal Sub-Basin Groundwater Sustainability Agency.

SECTION 5. Implementation. The Mayor and the City Clerk are hereby authorized and directed to execute and deliver the MOU for and on behalf of the City, and the Mayor and City staff are authorized to take any actions and execute any documents necessary to carry out the stated purposes of this Resolution, including authorizing non-substantive changes to the MOU, which are approved as to form by the City Attorney.

SECTION 6. Severability. If any provision of this Resolution or the application of any such provision to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this Resolution that can be given effect without the invalid provision or application, and to this end the provisions of this Resolution are severable.

SECTION 7. Effective Date. This Resolution shall become effective immediately upon its adoption.

PASSED, APPROVED AND ADOPTED this 15th day of March 2017.

Kara Spiegel
Mayor of the City of Corona, California

ATTEST:

City Clerk of the City of Corona, California

CERTIFICATION

I, Lisa Mobley, City Clerk of the City of Corona, California, do hereby certify that the foregoing Resolution was regularly passed and adopted by the City Council of the City of Corona, California, at a regular meeting thereof held on the 15th day of March 2017, by the following vote:

AYES:	**FOX, MONTANEZ, SCOTT, SPIEGEL**
NOES:	**NONE**
ABSENT:	**HALEY**
ABSTAINED:	**NONE**

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Corona, California, this 15th day of March 2017.

City Clerk of the City of Corona, California

(SEAL)

EXHIBIT "A-2"
TO
MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

NORCO RESOLUTION ON FORMATION OF THE TEMESCAL SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY

[SEE ATTACHED TWO (2) PAGES]

RESOLUTION NO. 2017-02

RESOLUTION OF THE CORONA UTILITY AUTHORITY AUTHORIZING THE CITY OF CORONA TO EXECUTE AND DELIVER THE MEMORANDUM OF UNDERSTANDING WITH THE CITY OF NORCO AND THE HOME GARDENS COUNTY WATER DISTRICT FOR THE PURPOSE OF JOINTLY ESTABLISHING AND SERVICING AS THE TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY

WHEREAS, in September 2014, the Governor signed three bills (SB 1168, SB 1319, and AB 1739) into law creating the Sustainable Groundwater Management Act of 2014 ("SGMA"), which generally requires the formation of one or more Groundwater Sustainability Agencies ("GSA") responsible for implementing sustainable groundwater management and preventing "undesirable results" in groundwater basins and sub-basins designated as a medium or high or priority basin by the California Department of Water Resources ("DWR"); and

WHEREAS, DWR has designated the Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin (the "Sub-Basin"), as a medium priority groundwater basin; and

WHEREAS, the City of Corona ("City"), the City of Norco ("Norco") and the Home Gardens County Water District ("HGCWD") each overlay a portion of the Sub-Basin and each exercise water management, water supply or land use authority within a portion of the Sub-Basin; and

WHEREAS, under SGMA, a combination of local agencies may elect to form a GSA for all or portions of the Sub-Basin through a memorandum of understanding; and

WHEREAS, the City, Norco and HGCWD have negotiated that certain Memorandum of Understanding (Temescal Sub-Basin Groundwater Sustainability Agency) ("MOU") by and between the City of Corona, the City of Norco, and the Home Gardens County Water District for the purpose of jointly establishing and servicing as the Temescal Sub-Basin Groundwater Sustainability Agency; and

WHEREAS, the Temescal Sub-Basin Groundwater Sustainability Agency will implement SGMA in the entire Sub-Basin; and

WHEREAS, the City has entered into a Water Enterprise Lease Agreement and a Wastewater Enterprise Management Agreement, both dated as of February 6, 2002, with the Corona Utility Authority (a joint powers agency and a public entity organized under the laws of the State of California) ("CUA") whereby the City has leased the City's water and wastewater systems to the CUA; and

WHEREAS, the City has also entered into a Water Enterprise Management Agreement and a Wastewater Enterprise Management Agreement, both dated as of February 6, 2002, with the CUA for the maintenance, management and operation of said water and wastewater systems (collectively "the CUA Management Agreements"); and

WHEREAS, to the extent that the MOU is deemed to be a "material contract" under the CUA Management Agreements, the CUA desires to authorize and direct the City to execute and deliver the MOU on behalf of the CUA and subject to the terms of the applicable CUA Management Agreements.

NOW, THEREFORE, BE IT RESOLVED, by the Corona Utility Authority, as follows:

SECTION 1. Approval of Agreement. The Corona Utility Authority hereby authorizes the City Council of the City to execute and deliver the MOU in substantially the form attached hereto as Exhibit "A" and incorporated herein by reference.

SECTION 2. City Implementation. The Corona Utility Authority hereby authorizes the City Council of the City to authorize the Mayor and City staff to take any actions and execute any documents necessary to carry out the stated purposes of this Resolution and the City Council's resolution approving the MOU, including authorizing non-substantive changes to the MOU, which are approved as to form by the City Attorney.

SECTION 3. CUA Implementation. The Corona Utility Authority hereby authorizes all officers of the Corona Utility Authority to take any actions and execute any documents necessary to carry out the stated purposes of this Resolution, including authorizing non-substantive changes to the MOU.

SECTION 4. Severability. If any provision of this Resolution or the application of any such provision to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this Resolution that can be given effect without the invalid provision or application, and to this end the provisions of this Resolution are severable.

SECTION 5. Effective Date. This Resolution shall become effective immediately upon its adoption.

PASSED, APPROVED AND ADOPTED this 15th day of March 2017.

Karen Spiegel
President of the Corona Utility Authority

ATTEST:

Secretary of the Corona Utility Authority

CA\JR\06100.30901\10179506.1

CERTIFICATION

I, Lisa Mobley, Secretary of the Corona Utility Authority, do hereby certify that the foregoing Resolution was adopted by the Board of Directors of the Corona Utility Authority, at its regular meeting held on the 15th day of March 2017, by the following vote:

AYES:	**FOX, MONTANEZ, SCOTT, SPIEGEL**
NOES:	**NONE**
ABSENT:	**HALEY**
ABSTAINED:	**NONE**

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of March 2017.

Secretary of the Corona Utility Authority

[SEAL]

RESOLUTION NO. 2017-12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NORCO, CALIFORNIA, APPROVING A MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE CITY OF CORONA, HOME GARDENS COUNTY WATER DISTRICT AND THE CITY OF NORCO FOR THE ESTABLISHMENT OF THE TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY, LOCATED IN NORCO, CALIFORNIA

WHEREAS, On September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319 and Assembly Bill 1739, known collectively as the Sustainable Groundwater Management Act ("SGMA"); and

WHEREAS, the Sustainable Groundwater Management Act (SGMA) is for groundwater to be managed sustainably in California's groundwater basins (California Water Code Sections 10733.2, *et seq*.) requires urban water suppliers to prepare and adopt groundwater sustainability plans (GSPs); and

WHEREAS, the Sustainable Groundwater Management Act requires that groundwater sustainability plans are to be prepared and submitted by January 31, 2020 by medium and priority groundwater basins; and

WHEREAS, the Department of Water Resources has determined the Temescal Basin to be a medium priority basin under the Sustainable Groundwater Management Act; and

WHEREAS, the Temescal Basin is not an adjudicated basin and the City of Norco is required to prepare a groundwater sustainability plan as an individual agency or with all agencies who extract groundwater from the basin as required by the Sustainable Groundwater Management Act; and

WHEREAS, the City of Corona, Home Gardens County Water District and the City of Norco desire to establish the Temescal Sub-Basin Groundwater Sustainability Agency to manage the Temescal groundwater basin; and

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Norco approve the Memorandum of Understanding to establish the Temescal Sub-Basin Groundwater Sustainability Agency.

PASSED AND ADOPTED by the City Council of the City of Norco at a regular meeting held on March 15, 2017.

Greg Newton, Mayor
City of Norco, California

ATTEST:

Cheryl L. Link, CMC, City Clerk
City of Norco, California

I, Cheryl L. Link, City Clerk of the City of Norco, do hereby certify that the foregoing Resolution was adopted by the City Council of the City of Norco, California at a regular meeting thereof held on March 15, 2017 by the following vote of the City Council:

AYES:	NEWTON, HOFFMAN, BASH, GRUNDMEYER, HANNA
NOES:	NONE
ABSENT:	NONE
ABSTAIN:	NONE

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Norco, California, on March 15, 2017.

Cheryl L. Link, CMC, City Clerk
City of Norco, California

EXHIBIT "B-1"
TO
MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

MAP OF TEMESCAL SUB-BASIN

[SEE ATTACHED ONE (1) PAGE]

Path: T:\Projects\Corona 46409-46410\GIS\Maps-2016GSA Formation\Temescal GSA Formation\Figure 2 - Temescal Subbasin Boundary.mxd

N

0 3,000 6,000

Scale in Feet

Temescal Subbasin (8-002 .09)

Legend

- Temescal Subbasin Groundwater Sustainability Agency (GSA)
- Temescal Subbasin of the Upper Santa Ana Valley Groundwater Basin

February 2017

TODD GROUNDWATER

Figure 2
Temescal Subbasin GSA
Subbasin Boundary

EXHIBIT "B-2"
TO
MEMORANDUM OF UNDERSTANDING
(TEMESCAL SUB-BASIN GROUNDWATER SUSTAINABILITY AGENCY)

MAP OF PARTIES' SERVICE AREAS
WITHIN THE TEMESCAL SUB-BASIN

[SEE ATTACHED ONE (1) PAGE]

Path: T:\Projects\Corona 46409-46410\GIS\Maps-2016GSA Formation\Temescal GSA Formation\Figure 1 - Temescal Subbasin GSA Service Areas.mxd

N

0 3,000 6,000

Scale in Feet

City of Norco Service Area

City of Home Gardens Service Area

City of Corona Service Area

Legend

- City of Corona Service Area
- City of Norco Service Area
- City of Home Gardens Service Area

February 2017

TODD GROUNDWATER

Figure 1
Temescal Subbasin GSA Service Areas

APPENDIX B

Temescal GSA Notice of Decision to become a Groundwater Sustainability Agency

PROOF OF PUBLICATION

CITY OF CORONA
OFFICE OF THE CITY CLERK
NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN that the City Council of the City of Corona, California, and the Corona Utility Authority will conduct a public hearing in the Council Chambers, at City Hall, 400 South Vicentia Avenue, in said City of Corona,
ON WEDNESDAY, MARCH 15, 2017 AT 6:30 P.M. or thereafter upon the following:

PROPOSED ACTION:

The City Council and the Corona Utility Authority will consider entering into a Memorandum of Understanding ("MOU") with the City of Norco ("Norco") and the Home Gardens Water District ("HGWD") for the purpose of establishing the Temescal Sub-Basin Groundwater Sustainability Agency to serve as the groundwater sustainability agency for the Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin (DWR Basin Number 8-2.09) ("Sub-Basin") pursuant to the requirements of the Sustainable Groundwater Management Act of 2014 ("SGMA"). The primary purpose of a groundwater sustainability agency under SGMA is to develop a groundwater sustainability plan ("GSP") to achieve long-term groundwater sustainability. The parties to the MOU will work jointly and cooperatively to serve as the groundwater sustainability agency and to satisfy the requirements of SGMA. Each party to the MOU will participate at its sole cost and expense and will be financially responsible for collecting data or information from that party's service area. The City of Corona will have the primary responsibility to develop a GSP and submit it to the California Department of Water Resources ("DWR") for review and evaluation.

This is a public hearing and you are invited to attend and comment on the application described above. If you challenge any portion of this project in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered at, or prior to, the public hearing. If you have written comments that you wish to be included in the staff report, please deliver them to the City Clerk, on or before the Tuesday prior to the meeting. If you have questions about this notice or the application to be heard, please call Katie Hockett with the Department of Water and Power at (951) 279-3601.

//S// Lisa Mobley, City Clerk
PUBLISHED: March 1, 2017 and March 8, 2017
JOB CC17-019

SENTINEL WEEKLY NEWS
"Adjudicated for City of Corona, Corona Judicial Dist., Riverside County, California"
SWN-2509 JOB CC17-019
MARCH 1, 8, 2017

THIS SPACE RESERVED FOR CLERK / RECORDING STAMP

Sentinel Weekly News
Adjudicated for the City of Corona, California
1307-C West 6th St., Suite 139
Corona, CA. 92882
Tel: (951) 737-9784 / Fax: (951) 737-9785
E-mail: SentinelWeekly@aol.com

PROOF OF PUBLICATION

(2010, 2015.5 C.C.P.)
STATE OF CALIFORNIA
COUNTY OF RIVERSIDE

I am a Citizen of the United States. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am an Authorized Representative of *SENTINEL WEEKLY NEWS* (formerly known as The Lake Mathews Sentinel), a Newspaper of General Circulation, printed and published weekly in the City of Corona, County of Riverside, and which Newspaper has been Adjudicated a Newspaper of General Circulation by the Superior Court of the County of Riverside, State of California, under the date of March 30, 1995, Case Number 262254; and under the date of December 7, 1999, Case Number 334071; and the Notice, of which the annexed is a printed copy, has been published in said Newspaper in accordance with the instructions of the Person(s) requesting publication, and not in any supplement thereof on the following dates to wit:

(1) ***March 1, 2017***
(2) ***March 8, 2017***
(3)
(4)

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

/S/ _____
Authorized Representative

DATED: ___ ***MARCH 8, 2017*** ___

THE PRESS-ENTERPRISE

1825 Chicago Ave, Suite 100
Riverside, CA 92507
951-684-1200
951-368-9018 FAX

PROOF OF PUBLICATION
(2010, 2015.5 C.C.P)

Publication(s): The Press-Enterprise

PROOF OF PUBLICATION OF

Ad Desc.: /

I am a citizen of the United States. I am over the age of eighteen years and not a party to or interested in the above entitled matter. I am an authorized representative of THE PRESS-ENTERPRISE, a newspaper in general circulation, printed and published daily in the County of Riverside, and which newspaper has been adjudicated a newspaper of general circulation by the Superior Court of the County of Riverside, State of California, under date of April 25, 1952, Case Number 54446, under date of March 29, 1957, Case Number 65673, under date of August 25, 1995, Case Number 267864, and under date of September 16, 2013, Case Number RIC 1309013; that the notice, of which the annexed is a printed copy, has been published in said newspaper in accordance with the instructions of the person(s) requesting publication, and not in any supplement thereof on the following dates, to wit:

03/04/2017

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: March 04, 2017
At: Riverside, California

Legal Advertising Representative, The Press-Enterprise

NORCO, CITY OF
2870 CLARK AVE
NORCO, CA 92860-1903

Ad Number: 0010910947-01

P.O. Number:

Ad Copy:

NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN that the City Council of the City of Norco, California, will conduct an public hearing in the Council Chambers, 2820 Clark Avenue, in said City on Wednesday, March 15, 2017, at 7:00 p.m. or thereafter, to consider the following:

Appeal Hearing: Conditional Use Permit 2015-28, Modification 1 (DeKruyf): A request to modify a condition of approval in Resolution 2015-73 for development of a service station associated with Site Plan 2015-23.

City staff has determined that the listed project above is consistent with the environmental determination for Site Plan 2015-23 pursuant to the California Environmental Quality Act and the City of Norco Environmental Guidelines and no additional action is needed. Please contact the Norco Planning Division at (951) 270-5682 for more information regarding said items.

Public Hearing: Approval of a Memorandum of Understanding (MOU) to Establish a Groundwater Sustainability Agency ("GSA")

Any person desiring may appear at said public hearing and be heard. Any person unable to attend said public hearing may submit written comments to the City Clerk on or before Wednesday, March 15, 2017, by 5:45 p.m. at Norco City Hall, 2870 Clark Avenue, Norco California 92860.

/S/
Cheryl L. Link, CMC
City Clerk
City of Norco

Posted: March 2, 2017
Published: March 4, 2017

THE PRESS-ENTERPRISE

1825 Chicago Ave, Suite 100
Riverside, CA 92507
951-684-1200
951-368-9018 FAX

PROOF OF PUBLICATION
(2010, 2015.5 C.C.P)

Publication(s): The Press-Enterprise

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3/09, 03/16/2017

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: March 16, 2017
At: Riverside, California

Legal Advertising Representative, The Press-Enterprise

HOME GARDENS COUNTY WATER DISTRICT
2832 N. GRANT ST.
CORONA, CA 92879

Ad Number: 0010913312-01

P.O. Number:

Ad Copy:

HOME GARDENS COUNTY WATER DISTRICT
NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN that the Board of Directors of the Home Gardens County Water District will conduct a public hearing at the District Office, at 3832 N. Grant Street, Corona, CA 92879, on Thursday, March 23rd, 2017 at 6:00 p.m. or thereafter upon the following:

PROPOSED ACTION: The Board of Directors will consider entering into a Memorandum of Understanding ("MOU") with the City of Norco ("Norco") and the City of ("Corona") for the purpose of establishing the Temescal Sub-Basin Groundwater Sustainability Agency to serve as the groundwater sustainability agency for the Temescal Sub-Basin of the Upper Santa Ana Valley Groundwater Basin (DWR Basin Number 8-2.09) ("Sub-Basin") pursuant to the requirements of the Sustainable Groundwater Management Act of 2014 ("SGMA"). The primary purpose of a groundwater sustainability agency under SGMA is to develop a groundwater sustainability plan ("GSP") to achieve long-term groundwater sustainability. The parties to the MOU will work jointly and cooperatively to serve as the groundwater sustainability agency and to satisfy the requirements of SGMA. Each party to the MOU will participate at its sole cost and expense and will be financially responsible for collecting data or information from that party's service area. The City of Corona will have the primary responsibility to develop a GSP and submit it to the California Department of Water Resources ("DWR") for review and evaluation.

This is a public hearing and you are invited to attend and comment on the application described above. If you challenge any portion of this project in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered at, or prior to, the public hearing. If you have written comments, please deliver them to the District Office, on or before the Tuesday prior to the meeting. If you have questions about this notice or the application to be heard, please call David Vigil with the Home Gardens County Water District at (951) 737-4741.

David Vigil, Secretary/District Manager

PUBLISHED: March 9th, 2017 and March 16th, 2017

THE PRESS-ENTERPRISE

1825 Chicago Ave, Suite 100
Riverside, CA 92507
951-684-1200
951-368-9018 FAX

PROOF OF PUBLICATION
(2010, 2015.5 C.C.P)

Publication(s): The Press-Enterprise

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3/09, 03/16/2017

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Date: March 16, 2017
At: Riverside, California

Legal Advertising Representative, The Press-Enterprise

HOME GARDENS COUNTY WATER DISTRICT
2832 N. GRANT ST.
CORONA, CA 92879

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David Vigil, Secretary/District Manager

PUBLISHED: March 9th, 2017 and March 16th, 2017

APPENDIX C

Groundwater Sustainability Plan Elements Guide

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
§ 354.			**Introduction to Plan Contents**					
			This Article describes the required contents of Plans submitted to the Department for evaluation, including administrative information, a description of the basin setting, sustainable management criteria, description of the monitoring network, and projects and management actions.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
SubArticle 1.			**Administrative Information**					
§ 354.2.			**Introduction to Administrative Information**					
			This Subarticle describes information in the Plan relating to administrative and other general information about the Agency that has adopted the Plan and the area covered by the Plan.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
§ 354.4.			**General Information**					
			Each Plan shall include the following general information:					
(a)			An executive summary written in plain language that provides an overview of the Plan and description of groundwater conditions in the basin.	21:29	ES			
(b)			A list of references and technical studies relied upon by the Agency in developing the Plan. Each Agency shall provide to the Department electronic copies of reports and other documents and materials cited as references that are not generally available to the public.	248:253	10			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10733.2 and 10733.4, Water Code.					
§ 354.6.			**Agency Information**					
			When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:					
(a)			The name and mailing address of the Agency.	31:32	1.3			
(b)			The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.	32:34	1.4			
(c)			The name and contact information, including the phone number, mailing address and electronic mail address, of the plan manager.	31:32	1.3			
(d)			The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.	33	1.4.3			
(e)			An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.	33:34	1.4.4			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10723.8, 10727.2, and 10733.2, Water Code.					
§ 354.8.			**Description of Plan Area**					

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
			Each Plan shall include a description of the geographic areas covered, including the following information:					
(a)			One or more maps of the basin that depict the following, as applicable:					
	(1)		The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.	40, 39	2.1	Figure 1-1		
	(2)		Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.	40, 67	2.1	Figure 2-2		
	(3)		Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.	40:42, 67:68	2.2	Figure 2-1, 2-2		
	(4)		Existing land use designations and the identification of water use sector and water source type.	43:46, 49, 69, 75:76	2.4.9, 2.3.3, 2.3.2	Figure 2-4, Figure 2-10, Figure 2-11		
	(5)		The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.	40, 43, 70:73	2.3.2.1	Figures 2-5,2-6, 2-7, 2-8		
(b)			A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.	40, 67:68	2.1	Figure 2-1, 2-2		
(c)			Identification of existing water resource monitoring and management programs, and description of any such programs the Agency plans to incorporate in its monitoring network or in development of its Plan. The Agency may coordinate with existing water resource monitoring and management programs to incorporate and adopt that program as part of the Plan.	46:50	2.4			
(d)			A description of how existing water resource monitoring or management programs may limit operational flexibility in the basin, and how the Plan has been developed to adapt to those limits.	46:50	2.4			
(e)			A description of conjunctive use programs in the basin.	43:46	2.3.2			
(f)			A plain language description of the land use elements or topic categories of applicable general plans that includes the following:					
	(1)		A summary of general plans and other land use plans governing the basin.	54:59, 73:74	2.6	Figure 2-8, 2-9		
	(2)		A general description of how implementation of existing land use plans may change water demands within the basin or affect the ability of the Agency to achieve sustainable groundwater management over the planning and implementation horizon, and how the Plan addresses those potential effects	58:59	2.6.4			
	(3)		A general description of how implementation of the Plan may affect the water supply assumptions of relevant land use plans over the planning and implementation horizon.	59	2.6.5			

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(4)		A summary of the process for permitting new or replacement wells in the basin, including adopted standards in local well ordinances, zoning codes, and policies contained in adopted land use plans.	61	2.7.3			
	(5)		To the extent known, the Agency may include information regarding the implementation of land use plans outside the basin that could affect the ability of the Agency to achieve sustainable groundwater management.	62	2.7.5			
(g)			A description of any of the additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.	59:62	2.7			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10720.3, 10727.2, 10727.4, 10733, and 10733.2, Water Code.					
§ 354.10.			**Notice and Communication**					
			Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:					
(a)			A description of the beneficial uses and users of groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.	43:46, 85:86, 183, 191, 197, 200:203, 209:210, 304:333	233,3.10, 6.2.4, 6.3.4, 6.5.3, 6.6.3, 6.6.4, 6.6.7, 6.7.4, Appendix D			
(b)			A list of public meetings at which the Plan was discussed or considered by the Agency.	334:335	Appendix E			
(c)			Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.	640:699	Appendix I			
(d)			A communication section of the Plan that includes the following:					
	(1)		An explanation of the Agency's decision-making process.	32, 254:278	Section 1.4.1, Appendix A			
	(2)		Identification of opportunities for public engagement and a discussion of how public input and response will be used.	62:65, 304:639	Section 2.8, Appendices D, E, F, G, and H			
	(3)		A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.	62:65, 304:639	Section 2.8, Appendices D, E, F, G, and H			

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(4)		The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.	62:65, 304:639	Section 2.8, Appendices D, E, F, G, and H			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10723.2, 10727.8, 10728.4, and 10733.2, Water Code					
SubArticle 2.			**Basin Setting**					
§ 354.12.			**Introduction to Basin Setting**					
			This Subarticle describes the information about the physical setting and characteristics of the basin and current conditions of the basin that shall be part of each Plan, including the identification of data gaps and levels of uncertainty, which comprise the basin setting that serves as the basis for defining and assessing reasonable sustainable management criteria and projects and management actions. Information provided pursuant to this Subarticle shall be prepared by or under the direction of a professional geologist or professional engineer.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
§ 354.14.			**Hydrogeologic Conceptual Model**					
(a)			Each Plan shall include a descriptive hydrogeologic conceptual model of the basin based on technical studies and qualified maps that characterizes the physical components and interaction of the surface water and groundwater systems in the basin.	79:98	3	Figures 3-1 through 3-12		
(b)			The hydrogeologic conceptual model shall be summarized in a written description that includes the following:					
	(1)		The regional geologic and structural setting of the basin including the immediate surrounding area, as necessary for geologic consistency.	81, 87:91	Sections 3.4 and 3.5	Figures 3-1 through 3-5		
	(2)		Lateral basin boundaries, including major geologic features that significantly affect groundwater flow.	81:84, 91, 96	3.5, 3.6, and 3.7	Figure 3-5, 3-10		
	(3)		The definable bottom of the basin.	84:85, 97	3.8	Figure 3-11		
	(4)		Principal aquifers and aquitards, including the following information:					
		(A)	Formation names, if defined.	82:84, 91	3.6.1	Figure 3-5		
		(B)	Physical properties of aquifers and aquitards, including the vertical and lateral extent, hydraulic conductivity, and storativity, which may be based on existing technical studies or other best available information.	81:85, 91, 97, 700:788	3.4, 3.5, 3.6, 3.7, 3.8, and Appendix J	Figure 3-5, 3-10, Appendix J		
		(C)	Structural properties of the basin that restrict groundwater flow within the principal aquifers, including information regarding stratigraphic changes, truncation of units, or other features.	81:85, 91, 97, 700:788	3.4, 3.5, 3.6, 3.7, 3.8, and Appendix J	Figure 3-5, 3-10, Appendix J		

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
		(D)	General water quality of the principal aquifers, which may be based on information derived from existing technical studies or regulatory programs.	104:107, 136:137	4.4 and 4.5	Figures 4-15, 4-16		
		(E)	Identification of the primary use or uses of each aquifer, such as domestic, irrigation, or municipal water supply.	46, 85:86	3.10		Table 2-1	
	(5)		Identification of data gaps and uncertainty within the hydrogeologic conceptual model	86	3.11			
(c)			The hydrogeologic conceptual model shall be represented graphically by at least two scaled cross-sections that display the information required by this section and are sufficient to depict major stratigraphic and structural features in the basin.	81:84, 92:95	3.6	Figure 3-6: 3-9		
(d)			Physical characteristics of the basin shall be represented on one or more maps that depict the following:					
	(1)		Topographic information derived from the U.S. Geological Survey or another reliable source.	87		Figure 3-1		
	(2)		Surficial geology derived from a qualified map including the locations of cross-sections required by this Section.	91:92		Figure 3-5 and Figure 3-6		
	(3)		Soil characteristics as described by the appropriate Natural Resources Conservation Service soil survey or other applicable studies.	80, 90	3.2	Figure 3-4		
	(4)		Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas, including significant active springs, seeps, and wetlands within or adjacent to the basin.	96		Figure 3-10		
	(5)		Surface water bodies that are significant to the management of the basin.	88:89		Figure 3-2 and Figure 3-3		
	(6)		The source and point of delivery for imported water supplies.	40, 43:45, 74	2.3.2.1, 2.3.2.3	Figure 2-9		
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10727.2, 10733, and 10733.2, Water Code.					
§ 354.16.			**Groundwater Conditions**					
			Each Plan shall provide a description of current and historical groundwater conditions in the basin, including data from January 1, 2015, to current conditions, based on the best available information that includes the following:					
(a)			Groundwater elevation data demonstrating flow directions, lateral and vertical gradients, and regional pumping patterns, including:					
	(1)		Groundwater elevation contour maps depicting the groundwater table or potentiometric surface associated with the current seasonal high and seasonal low for each principal aquifer within the basin.	131:132		Figure 4-10 and Figure 4-11		
	(2)		Hydrographs depicting long-term groundwater elevations, historical highs and lows, and hydraulic gradients between principal aquifers.	123:130		Figure 4-2 and Figure 4-9		

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
(b)			A graph depicting estimates of the change in groundwater in storage, based on data, demonstrating the annual and cumulative change in the volume of groundwater in storage between seasonal high groundwater conditions, including the annual groundwater use and water year type.	172		Figure 5-6		
(c)			Seawater intrusion conditions in the basin, including maps and cross-sections of the seawater intrusion front for each principal aquifer.	111	4.9			
(d)			Groundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and map of the location of known groundwater contamination sites and plumes.	104:111, 135:137	4.4, 4.5, 4.6, 4.7, and 4.8	Figure 4-14 through 4-16		
(e)			The extent, cumulative total, and annual rate of land subsidence, including maps depicting total subsidence, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	103:104, 133:134	4.3	Figure 4-12 and 4-13		
(f)			Identification of interconnected surface water systems within the basin and an estimate of the quantity and timing of depletions of those systems, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	111:121, 138:144	4.10	Figures 4-17 through 4-23		
(g)			Identification of groundwater dependent ecosystems within the basin, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	111:121, 138:144	4.10	Figures 4-17 through 4-23		
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10723.2, 10727.2, 10727.4, and 10733.2, Water Code.					
§ 354.18.			**Water Budget**					
(a)			Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored. Water budget information shall be reported in tabular and graphical form.	145, 147:153, 171:172	5.1, 5.5	Figure 5-5 and 5-6		
(b)			The water budget shall quantify the following, either through direct measurements or estimates based on data:					
	(1)		Total surface water entering and leaving a basin by water source type.	154:157, 170	5.6	Figure 5-4	Table 5-3	
	(2)		Inflow to the groundwater system by water source type, including subsurface groundwater inflow and infiltration of precipitation, applied water, and surface water systems, such as lakes, streams, rivers, canals, springs and conveyance systems.	160:162, 172	5.7.1	Figure 5-6	Table 5-4	
	(3)		Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.	160, 163, 172	5.7.2	Figure 5-6	Table 5-4	
	(4)		The change in the annual volume of groundwater in storage between seasonal high conditions.	160, 164, 172	5.8, Appendix J	Figure 5-6	Table 5-4	

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(5)		If overdraft conditions occur, as defined in Bulletin 118, the water budget shall include a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions.	N/A				No overdraft conditions present
	(6)		The water year type associated with the annual supply, demand, and change in groundwater stored.	145:146, 167	5.2	Figure 5-1		
	(7)		An estimate of sustainable yield for the basin.	164:166	5.9		Table 5-5	
(c)			Each Plan shall quantify the current, historical, and projected water budget for the basin as follows:					
	(1)		Current water budget information shall quantify current inflows and outflows for the basin using the most recent hydrology, water supply, water demand, and land use information.	158:163, 172	5.7	Figure 5-6	Table 5-4	
	(2)		Historical water budget information shall be used to evaluate availability or reliability of past surface water supply deliveries and aquifer response to water supply and demand trends relative to water year type. The historical water budget shall include the following:					
		(A)	A quantitative evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical planned versus actual annual surface water deliveries, by surface water source and water year type, and based on the most recent ten years of surface water supply information.	43:45, 158:163, 172, 700:788	Section 2.3.2, 5.7, Appendix J	Figure 5-6	Table 5-4	
		(B)	A quantitative assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10 years, or as is sufficient to calibrate and reduce the uncertainty of the tools and methods used to estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.	158:163, 172, 700:788	5.7, Appendix J	Figure 5-6	Table 5-4	
		(C)	A description of how historical conditions concerning hydrology, water demand, and surface water supply availability or reliability have impacted the ability of the Agency to operate the basin within sustainable yield. Basin hydrology may be characterized and evaluated using water year type.	160, 164:167, 172	5.8, 5.9	Figure 5-6, Figure 5-1	Table 5-4	
	(3)		Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget components. The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon:					
		(A)	Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.	146:147, 154:163, 173:174, 176	5.3, 5.6, 5.7	Figures 5-7,5-8,5-10		

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
		(B)	Projected water demand shall utilize the most recent land use, evapotranspiration, and crop coefficient information as the baseline condition for estimating future water demand. The projected water demand information shall also be applied as the baseline condition used to evaluate future scenarios of water demand uncertainty associated with projected changes in local land use planning, population growth, and climate.	146:147, 153:163, 173:174, 176	5.3, 5.6, 5.7	Figures 5-7,5-8,5-10	Table 5-2	
		(C)	Projected surface water supply shall utilize the most recent water supply information as the baseline condition for estimating future surface water supply. The projected surface water supply shall also be applied as the baseline condition used to evaluate future scenarios of surface water supply availability and reliability as a function of the historical surface water supply identified in Section 354.18(c)(2)(A), and the projected changes in local land use planning, population growth, and climate.	147:163, 173:174, 176, 700:788	5.5, 5.6, 5.7, Appendix J	Figures 5-7,5-8,5-10		
(d)			The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget:					
	(1)		Historical water budget information for mean annual temperature, mean annual precipitation, water year type, and land use.	145:146, 172, 700:788	5.2, Appendix J	Figure 5-6		
	(2)		Current water budget information for temperature, water year type, evapotranspiration, and land use.	145:147, 172, 700:788	5.2,5.3, Appendix J	Figure 5-6		
	(3)		Projected water budget information for population, population growth, climate change, and sea level rise.	149:152, 173:174, 700:788	5.5.3, Appendix J	Figure 5-7 and 5-8		
(e)			Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions.	147:152, 700:788	5.5, 5.6, 5.7, 5.8, Appendix J			
(f)			The Department shall provide the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different groundwater and surface water model, pursuant to Section 352.4.	145, 700:788	5.1, Appendix J			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10721, 10723.2, 10727.2, 10727.6, 10729, and 10733.2, Water Code.					
§ 354.20.			**Management Areas**					

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
(a)			Each Agency may define one or more management areas within a basin if the Agency has determined that creation of management areas will facilitate implementation of the Plan. Management areas may define different minimum thresholds and be operated to different measurable objectives than the basin at large, provided that undesirable results are defined consistently throughout the basin.	N/A				No Management Areas defined
(b)			A basin that includes one or more management areas shall describe the following in the Plan:					
	(1)		The reason for the creation of each management area.	N/A				No Management Areas defined
	(2)		The minimum thresholds and measurable objectives established for each management area, and an explanation of the rationale for selecting those values, if different from the basin at large.	N/A				No Management Areas defined
	(3)		The level of monitoring and analysis appropriate for each management area.	N/A				No Management Areas defined
	(4)		An explanation of how the management area can operate under different minimum thresholds and measurable objectives without causing undesirable results outside the management area, if applicable.	N/A				No Management Areas defined
(c)			If a Plan includes one or more management areas, the Plan shall include descriptions, maps, and other information required by this Subarticle sufficient to describe conditions in those areas.	N/A				No Management Areas defined
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10733.2 and 10733.4, Water Code.					
SubArticle 3.			**Sustainable Management Criteria**					
§ 354.22.			**Introduction to Sustainable Management Criteria**					
			This Subarticle describes criteria by which an Agency defines conditions in its Plan that constitute sustainable groundwater management for the basin, including the process by which the Agency shall characterize undesirable results, and establish minimum thresholds and measurable objectives for each applicable sustainability indicator.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
§ 354.24.			**Sustainability Goal**					
			Each Agency shall establish in its Plan a sustainability goal for the basin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline. The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon.	178	6.1.1			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10721, 10727, 10727.2, 10733.2, and 10733.8, Water Code.					

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
§ 354.26.			**Undesirable Results**					
(a)			Each Agency shall describe in its Plan the processes and criteria relied upon to define undesirable results applicable to the basin. Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.	181:182, 190, 196, 200:201, 208	6.2.1, 6.3.1, 6.5.1, 6.6.1, 6.7.1			
(b)			The description of undesirable results shall include the following:					
	(1)		The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting, and other data or models as appropriate.	182, 190, 196:197, 201, 208	6.2.2, 6.3.2, 6.5.2, 6.6.2, 6.7.2			
	(2)		The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.	183, 190:191, 197, 201:202, 209	6.2.3, 6.3.3, 6.5.3, 6.6.3, 6.7.3			
	(3)		Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results.	183, 191, 197, 202, 209:210	6.2.4, 6.3.4, 6.5.3, 6.6.4, 6.7.4			
(c)			The Agency may need to evaluate multiple minimum thresholds to determine whether an undesirable result is occurring in the basin. The determination that undesirable results are occurring may depend upon measurements from multiple monitoring sites, rather than a single monitoring site.	183:186, 191:192, 197:198	6.2.5, 6.3.5, 6.5.4, 6.6.5, 6.7.5			
(d)			An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.	195	6.4			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10721, 10723.2, 10727.2, 10733.2, and 10733.8, Water Code.					
§ 354.28.			**Minimum Thresholds**					
(a)			Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.5, 6.7.6			
(b)			The description of minimum thresholds shall include the following:					
	(1)		The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the basin setting.	183:186, 191:193, 197:199, 202:206, 210	6.2.5, 6.3.5, 6.5.4, 6.6.4, 6.7.5			

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(2)		The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.6, 6.7.6			
	(3)		How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.6, 6.7.6			
	(4)		How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.6, 6.7.6			
	(5)		How state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.6, 6.7.6			
	(6)		How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.	185:189, 192:194, 197:199, 206:207, 210:212	6.2.6, 6.3.6, 6.5.4, 6.6.6, 6.7.6			
(c)			Minimum thresholds for each sustainability indicator shall be defined as follows:					
	(1)		Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results. Minimum thresholds for chronic lowering of groundwater levels shall be supported by the following:					
		(A)	The rate of groundwater elevation decline based on historical trends, water year type, and projected water use in the basin.	100:101, 123:130, 181:189, 214	4.1.3, 6.2	Figure 4-2: 4-9, Figure 6-1		
		(B)	Potential effects on other sustainability indicators.	187:188	6.2.6.2			
	(2)		Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.	189:195	6.3			

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(3)		Seawater Intrusion. The minimum threshold for seawater intrusion shall be defined by a chloride concentration isocontour for each principal aquifer where seawater intrusion may lead to undesirable results. Minimum thresholds for seawater intrusion shall be supported by the following:					
		(A)	Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold and measurable objective for each principal aquifer.	195	6.4			
		(B)	A description of how the seawater intrusion minimum threshold considers the effects of current and projected sea levels.	195	6.4			
	(4)		Degraded Water Quality. The minimum threshold for degraded water quality shall be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results. The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin. In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.	195:200	6.5			
	(5)		Land Subsidence. The minimum threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results. Minimum thresholds for land subsidence shall be supported by the following:					
		(A)	Identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how the Agency has determined and considered those uses and interests, and the Agency's rationale for establishing minimum thresholds in light of those effects.	200:207	6.6			
		(B)	Maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum threshold and measurable objectives.	200:207, 131	6.6	Figure 4-10		
	(6)		Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:					
		(A)	The location, quantity, and timing of depletions of interconnected surface water.	207:213, 138:144	6.7	Figures 4-17 through 4-23		
		(B)	A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph.	210, 138:144	6.7.5	Figures 4-17 through 4-23		

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
(d)			An Agency may establish a representative minimum threshold for groundwater elevation to serve as the value for multiple sustainability indicators, where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual minimum thresholds as supported by adequate evidence.	189:195	6.3			
(e)			An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish minimum thresholds related to those sustainability indicators.	195	6.4			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10723.2, 10727.2, 10733, 10733.2, and 10733.8, Water Code.					
§ 354.30.			**Measurable Objectives**					
(a)			Each Agency shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon.	189, 194:195, 199:200, 206:207, 212:213	6.2.7, 6.3.7, 6.5.5, 6.6.6, 6.7.7			
(b)			Measurable objectives shall be established for each sustainability indicator, based on quantitative values using the same metrics and monitoring sites as are used to define the minimum thresholds.	189, 194:195, 199:200, 206:207, 212:213	6.2.7, 6.3.7, 6.5.5, 6.6.6, 6.7.7			
(c)			Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.	189, 194:195, 199:200, 206:207, 212:213	6.2.7, 6.3.7, 6.5.5, 6.6.6, 6.7.7			
(d)			An Agency may establish a representative measurable objective for groundwater elevation to serve as the value for multiple sustainability indicators where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual measurable objectives as supported by adequate evidence.	194:195	6.3.7			
(e)			Each Plan shall describe a reasonable path to achieve the sustainability goal for the basin within 20 years of Plan implementation, including a description of interim milestones for each relevant sustainability indicator, using the same metric as the measurable objective, in increments of five years. The description shall explain how the Plan is likely to maintain sustainable groundwater management over the planning and implementation horizon.	178:181	6.1			
(f)			Each Plan may include measurable objectives and interim milestones for additional Plan elements described in Water Code Section 10727.4 where the Agency determines such measures are appropriate for sustainable groundwater management in the basin.	189, 194:195, 199:200, 206:207, 212:213	6.2.7, 6.3.7, 6.5.5, 6.6.6, 6.7.7			

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				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
(g)			An Agency may establish measurable objectives that exceed the reasonable margin of operational flexibility for the purpose of improving overall conditions in the basin, but failure to achieve those objectives shall not be grounds for a finding of inadequacy of the Plan.	189, 194:195, 199:200, 206:207, 212:213	6.2.7, 6.3.7, 6.5.5, 6.6.6, 6.7.7			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10727.2, 10727.4, and 10733.2, Water Code.					
SubArticle 4.			**Monitoring Networks**					
§ 354.32.			**Introduction to Monitoring Networks**					
			This Subarticle describes the monitoring network that shall be developed for each basin, including monitoring objectives, monitoring protocols, and data reporting requirements. The monitoring network shall promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through implementation of the Plan.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
§ 354.34.			**Monitoring Network**					
(a)			Each Agency shall develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation.	215:221	7.1		Table 7-1	
(b)			Each Plan shall include a description of the monitoring network objectives for the basin, including an explanation of how the network will be developed and implemented to monitor groundwater and related surface conditions, and the interconnection of surface water and groundwater, with sufficient temporal frequency and spatial density to evaluate the affects and effectiveness of Plan implementation. The monitoring network objectives shall be implemented to accomplish the following:					
	(1)		Demonstrate progress toward achieving measurable objectives described in the Plan.	215:221	7.1		Table 7-1	
	(2)		Monitor impacts to the beneficial uses or users of groundwater.	215:221	7.1		Table 7-1	
	(3)		Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds.	215:221	7.1		Table 7-1	
	(4)		Quantify annual changes in water budget components.	215:221	7.1		Table 7-1	
(c)			Each monitoring network shall be designed to accomplish the following for each sustainability indicator:					
	(1)		Chronic Lowering of Groundwater Levels. Demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features by the following methods:					

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		(A)	A sufficient density of monitoring wells to collect representative measurements through depth-discrete perforated intervals to characterize the groundwater table or potentiometric surface for each principal aquifer.	217:221, 226	7.1.1	Figure 7-1	Table 7-2	
		(B)	Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions.	217:221, 226	7.1.1	Figure 7-1	Table 7-2	
	(2)		Reduction of Groundwater Storage. Provide an estimate of the change in annual groundwater in storage.	217:219	7.1.2			
	(3)		Seawater Intrusion. Monitor seawater intrusion using chloride concentrations, or other measurements convertible to chloride concentrations, so that the current and projected rate and extent of seawater intrusion for each applicable principal aquifer may be calculated.	219	7.1.3			
	(4)		Degraded Water Quality. Collect sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators, as determined by the Agency, to address known water quality issues.	218, 220:221, 226	7.1.5	Figure 7-2	Table 7-2	
	(5)		Land Subsidence. Identify the rate and extent of land subsidence, which may be measured by extensometers, surveying, remote sensing technology, or other appropriate method.	219:220	7.1.4			
	(6)		Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:					
		(A)	Flow conditions including surface water discharge, surface water head, and baseflow contribution.	221	7.1.6			
		(B)	Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.	221	7.1.6			
		(C)	Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.	221	7.1.6			
		(D)	Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.	221	7.1.6			
(d)			The monitoring network shall be designed to ensure adequate coverage of sustainability indicators. If management areas are established, the quantity and density of monitoring sites in those areas shall be sufficient to evaluate conditions of the basin setting and sustainable management criteria specific to that area.	215:221, 226:227	7.1	Figure 7-1 and 7-2		
(e)			A Plan may utilize site information and monitoring data from existing sources as part of the monitoring network.	215:221	7.1		Table 7-1	
(f)			The Agency shall determine the density of monitoring sites and frequency of measurements required to demonstrate short-term, seasonal, and long-term trends based upon the following factors:					

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				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(1)		Amount of current and projected groundwater use.	215:221	7.1			
	(2)		Aquifer characteristics, including confined or unconfined aquifer conditions, or other physical characteristics that affect groundwater flow.	215:221	7.1			
	(3)		Impacts to beneficial uses and users of groundwater and land uses and property interests affected by groundwater production, and adjacent basins that could affect the ability of that basin to meet the sustainability goal.	215:221	7.1			
	(4)		Whether the Agency has adequate long-term existing monitoring results or other technical information to demonstrate an understanding of aquifer response.	215:221	7.1			
(g)			Each Plan shall describe the following information about the monitoring network:					
	(1)		Scientific rationale for the monitoring site selection process.	215:221	7.1			
	(2)		Consistency with data and reporting standards described in Section 352.4. If a site is not consistent with those standards, the Plan shall explain the necessity of the site to the monitoring network, and how any variation from the standards will not affect the usefulness of the results obtained.	222:223	7.2			
	(3)		For each sustainability indicator, the quantitative values for the minimum threshold, measurable objective, and interim milestones that will be measured at each monitoring site or representative monitoring sites established pursuant to Section 354.36.	215:221	7.1			
(h)			The location and type of each monitoring site within the basin displayed on a map, and reported in tabular format, including information regarding the monitoring site type, frequency of measurement, and the purposes for which the monitoring site is being used.	215:221	7.1			
(i)			The monitoring protocols developed by each Agency shall include a description of technical standards, data collection methods, and other procedures or protocols pursuant to Water Code Section 10727.2(f) for monitoring sites or other data collection facilities to ensure that the monitoring network utilizes comparable data and methodologies.	222:223	7.2			
(j)			An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish a monitoring network related to those sustainability indicators.	215:221	7.1			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10723.2, 10727.2, 10727.4, 10728, 10733, 10733.2, and 10733.8, Water Code					
§ 354.36.			**Representative Monitoring**					
			Each Agency may designate a subset of monitoring sites as representative of conditions in the basin or an area of the basin, as follows:					
(a)			Representative monitoring sites may be designated by the Agency as the point at which sustainability indicators are monitored, and for which quantitative values for minimum thresholds, measurable objectives, and interim milestones are defined.	224	7.3			

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(b)			(b) Groundwater elevations may be used as a proxy for monitoring other sustainability indicators if the Agency demonstrates the following:					
	(1)		Significant correlation exists between groundwater elevations and the sustainability indicators for which groundwater elevation measurements serve as a proxy.	224	7.3			
	(2)		Measurable objectives established for groundwater elevation shall include a reasonable margin of operational flexibility taking into consideration the basin setting to avoid undesirable results for the sustainability indicators for which groundwater elevation measurements serve as a proxy.	224	7.3			
(c)			The designation of a representative monitoring site shall be supported by adequate evidence demonstrating that the site reflects general conditions in the area.	224	7.3			
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10727.2 and 10733.2, Water Code					
§ 354.38.			**Assessment and Improvement of Monitoring Network**					
(a)			Each Agency shall review the monitoring network and include an evaluation in the Plan and each five-year assessment, including a determination of uncertainty and whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal for the basin.	224:225	7.5		Table 7-3	
(b)			Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites at a sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy minimum standards of the monitoring network adopted by the Agency.	224:225	7.5		Table 7-3	
(c)			If the monitoring network contains data gaps, the Plan shall include a description of the following:					
	(1)		The location and reason for data gaps in the monitoring network.	225			Table 7-3	
	(2)		Local issues and circumstances that limit or prevent monitoring.	224:225	7.5		Table 7-3	
(d)			Each Agency shall describe steps that will be taken to fill data gaps before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.	224:225	7.5		Table 7-3	
(e)			Each Agency shall adjust the monitoring frequency and density of monitoring sites to provide an adequate level of detail about site-specific surface water and groundwater conditions and to assess the effectiveness of management actions under circumstances that include the following:					
	(1)		Minimum threshold exceedances.	215:221	7.1			
	(2)		Highly variable spatial or temporal conditions.	215:221	7.1			
	(3)		Adverse impacts to beneficial uses and users of groundwater.	215:221	7.1			
	(4)		The potential to adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of sustainability goals in an adjacent basin.	215:221	7.1			
			Note: Authority cited: Section 10733.2, Water Code.					

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			Reference: Sections 10723.2, 10727.2, 10728.2, 10733, 10733.2, and 10733.8, Water Code					
§ 354.40.			**Reporting Monitoring Data to the Department**					
			Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10728, 10728.2, 10733.2, and 10733.8, Water Code.					
SubArticle 5.			**Projects and Management Actions**					
§ 354.42.			**Introduction to Projects and Management Actions**					
			This Subarticle describes the criteria for projects and management actions to be included in a Plan to meet the sustainability goal for the basin in a manner that can be maintained over the planning and implementation horizon.					
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Section 10733.2, Water Code.					
§ 354.44.			**Projects and Management Actions**					
(a)			Each Plan shall include a description of the projects and management actions the Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.	228:240	8			
(b)			Each Plan shall include a description of the projects and management actions that include the following:					
	(1)		A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:					
		(A)	A description of the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
		(B)	The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(2)		If overdraft conditions are identified through the analysis required by Section 354.18, the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.	N/A				No overdraft conditions present

Article 5.			Plan Contents for Temescal Basin	GSP Document References				
				Page Numbers of Plan	Or Section Numbers	Or Figure Numbers	Or Table Numbers	Notes
	(3)		A summary of the permitting and regulatory process required for each project and management action.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(4)		The status of each project and management action, including a time-table for expected initiation and completion, and the accrual of expected benefits.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(5)		An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(6)		An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(7)		A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(8)		A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
	(9)		A description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
(c)			Projects and management actions shall be supported by best available information and best available science.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
(d)			An Agency shall take into account the level of uncertainty associated with the basin setting when developing projects or management actions.	230:240	8.1,8.2,8.3		Tables 8-1 through 8-4	
			Note: Authority cited: Section 10733.2, Water Code.					
			Reference: Sections 10727.2, 10727.4, and 10733.2, Water Code.					

APPENDIX D

Temescal Groundwater Sustainability Plan
Stakeholder Outreach Plan

Temescal Subbasin Groundwater Sustainability Plan
Outreach and Stakeholder Involvement Communications Plan

July 22, 2020

Prepared for:

City of Corona Department of Water and Power

Prepared by:

Kearns & West, in coordination with Todd Groundwater

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Appendices

1. Introduction

Background

The State of California Sustainable Groundwater Management Act (SGMA), passed in 2014, calls for the development and implementation of groundwater sustainability plans for all basins determined high and medium priority by the California Department of Water Resources. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans with a deadline of 2042. SGMA gives local agencies authority to define and plan for achieving and maintaining sustainable groundwater management while avoiding specific undesirable results through the preparation and implementation of a Groundwater Sustainability Plan (GSP).

The Temescal Subbasin is designated as a medium-priority basin. The basin lies mostly within the boundaries of the cities of Corona and Norco, and Home Gardens, an unincorporated area of Riverside County within the City of Corona's sphere of influence. See Appendix A for the Temescal Subbasin map. The City of Corona Department of Water and Power, the City of Norco, and Home Gardens County Water District provide water service to most of the basin, but there are some small areas outside the agencies' combined jurisdictions. These areas are either managed by the U.S. Forest Service, or underlie Prado Reservoir, which is operated by the United States Army Corps of Engineers.

Public agencies with water or land use authority are eligible to sustainably manage groundwater resources locally through the formation of a Groundwater Sustainability Agency (GSA) and preparation of a GSP. The Temescal Subbasin GSA (hereafter GSA) was formed by a Memorandum of Understanding (MOU) among the City of Corona, the City of Norco, and the Home Gardens County Water District. The GSA is dedicated to participating in the collective goals of groundwater sustainability and good basin management through the development of a GSP for the Temescal Subbasin.

Sustainable management of the Temescal Subbasin is critical to local water supply reliability. The three local agencies have water supply portfolios that include imported water, groundwater from multiple local basins, and Corona and Norco use reclaimed water for landscape irrigation. Water conservation measures have also been implemented (as documented in the recent Corona and Norco Urban Water Management Plans) and provide an important tool for responding to water shortages.

The GSA members have long cooperated in water supply planning, monitoring, and management in the Temescal Subbasin. The City of Corona has had a lead role, including preparation in 2008 of a Groundwater Management Plan for the Temescal Subbasin in accordance with State Assembly Bill 3030. This cooperative management will continue for preparation of the Temescal Subbasin GSP (hereafter GSP). The GSP will be prepared and applied jointly among the three agencies. Under the MOU establishing the GSA, the City of

Corona accepted the lead role in developing a GSP for the Temescal Subbasin and submitting it to the California Department of Water Resources.

Purpose

The purpose of this Outreach and Stakeholder Involvement Communications Plan is to provide a framework for integrating public and stakeholder outreach and involvement into GSP preparation. The Outreach and Stakeholder Involvement Communications Plan clarifies objectives, outlines important categories of stakeholders and potential interests, determines methods and timing of outreach and involvement activities, and establishes a process for evaluation and adaptation should the plan need to be updated. Under the requirements of SGMA, GSAs must consider the interests of all beneficial uses and users of groundwater and provide opportunities for public engagement and active involvement of diverse social, cultural, and economic elements of the population.

Objectives

This plan will help ensure SGMA requirements are met for the unique needs of the communities and stakeholders connected to the groundwater of the Temescal Subbasin. The plan will also be guided by the additional stakeholder outreach and stakeholder involvement objectives determined by the GSA. These objectives are to:

- Inform all stakeholders of the GSP development process, including purpose, opportunities and issues, core recommendations, and timeline.
- Provide meaningful opportunities for stakeholders and the public to learn, ask questions, and provide input.
- Involve the many diverse communities and stakeholders of Corona, Norco, and Home Gardens, recognizing that different approaches may be needed to reach specific populations like Disadvantaged Communities, and flexibility and adaptation in approach may be required.
- Ensure a transparent process where stakeholders and the public can understand what important discussions are taking place, how they can participate in them, and how input is being used.

A Note on Covid-19

Given the current Covid-19 crisis, many activities that would usually take place in-person during a planning process, such as workshops and community events, may not be possible. With the uncertainty of when in-person activities will be allowed by local and state authorities or deemed safe by communities, other involvement tools like virtual public meetings and communication and calls with partners will be employed where appropriate to meet the involvement goals for the GSP. Furthermore, even when in-person gatherings are allowed by health authorities, there may be community members who are not able to attend due to individual risk factors. Weaving different virtual activities together with the GSP process will require flexibility as well as thoughtfulness in involving the public.

2. GSA Decision Making Process

As noted, the cities of Corona and Norco and the Home Gardens County Water District have developed and adopted an MOU forming the GSA for the Temescal Subbasin. The GSP will be prepared under the authority of the GSA, with the City of Corona serving as lead agency.

The City of Corona is a General Law City operating with a City Council/City Manager form of government. The City Council is composed of five Council Members including the Mayor and Vice Mayor. Corona's City Council Members are community leaders who listen to all citizens of the City, prioritize plans and projects, allocate funds, and make decisions essential to the future of Corona. The Corona City Council members are elected officers identified in Government Code Section 87200. The City Council meets the first and third Wednesday of each month at 6:30 PM at Corona City Hall, 400 South Vicentia Ave, Corona, California. Meetings are announced, and agenda are posted on the City of Corona website; the meetings are open to the public. The vote of a majority of City Council Members present at any meeting attended by a quorum is necessary to determine any proposition or resolution presented. The City Council is supported by City staff from multiple departments. The Department of Water and Power is leading the GSP work for the City and other members of the GSA.

The City of Norco is a Charter City operating with a City Council/City Manager form of government. The Norco City Council is the elected body of city government within the City of Norco. The Norco City Council consists of five members elected at large for four-year terms by the citizens of Norco. Annually, the Norco City Council appoints a Mayor and Mayor Pro-Tem from its own membership to serve a one-year term. The Norco City Council makes all policy decisions and adopts laws for the City of Norco. The Norco City Council members are elected officers identified in Government Code Section 87200. The City Council meets the first and third Wednesday of each month at 7:00 p.m. at Council Chambers located at 2820 Clark Avenue, Norco, California. Meetings are announced and open to the public. The vote of a majority of City Council Members present at any meeting attended by a quorum is necessary to determine any proposition or resolution presented. Norco City Council meeting agenda are posted on the City of Norco website.

The Home Gardens County Water District is a special district formed under State law to provide water supply within its service area. Home Gardens is governed by a 5-person Board of Directors that elects a president from its members and appoints a secretary. The Board meets every 3rd Thursday of every month at its office, located at 3832 Grant St, Corona, California. Meetings are announced, and agenda are posted at various public locations throughout Home Gardens; the meetings are open to the public. The board (except as otherwise specifically provided in the California Water Code) manages and conducts the business and affairs of the Home Gardens County Water District. The vote of a majority of directors present at any meeting attended by a quorum is necessary to determine any proposition or resolution presented.

3. Stakeholders and Potential Interests

List of Interested Parties

Formulating an effective GSP will rely in part on soliciting input from as many stakeholders as possible to ensure that the plan explores and addresses the topics of greatest interest. During formation, the GSA submitted an initial list of parties interested in receiving notices regarding plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents (see Appendix B). This initial list was used to create a list of stakeholders that will be updated throughout the GSP preparation.

Stakeholder Categories

Community members and contacts from stakeholder organizations (such as local, state, and federal agencies; businesses; community organizations; and non-profits) will be sought and involved throughout GSP preparation. The following are key stakeholder categories:

- Agricultural Interests
- California Native American Tribes
- California Statewide Groundwater Elevation Monitoring Agencies
- Businesses and Development
- Disadvantaged Communities
- Domestic Well Owners
- Environmental and Conservation
- Extractive Industry
- Federal Government Agencies
- Groundwater Right Holders
- Industrial Well Operators
- Land Use Planning Agencies
- Local Water Districts
- Municipal Well Operators
- Private Water Users
- Regulatory Agencies
- Surface Water User

Disadvantaged and Severely Disadvantaged Communities

Disadvantaged Communities are characterized by an annual median household income less than 80% of the California statewide median household income and Severely Disadvantaged Communities are characterized by an annual median household income less than 60% of the California statewide median household income. In many instances, members of these communities have faced historical disinvestment, systemic racism, and environmental injustices among other systemic challenges. Focused attention is required to ensure that they are provided opportunities to be informed and involved in planning processes.

The map in Appendix C shows the Disadvantaged and Severely Disadvantaged Communities within the Temescal Subbasin, representing all the areas identified from census-designated places, tracts, and block groups. The map reveals broad disadvantaged areas across the communities of the City of Corona and Home Gardens, centered around the State Route 91 corridor stretching from both sides of its intersection with Interstate 15 to State Route 71, including areas near the Corona Municipal Airport. As noted in the One Water One Watershed Plan Update 2018 (the Integrated Regional Water Management Plan for the Santa Ana River Watershed), specific communities who meet the criteria for disadvantaged communities may need to be involved, but are not yet identifiable by currently available census information. These communities will be included in focused outreach as they are identified. Involving these communities is needed for the preparation and implementation of the GSP in a way that supports a long-term sustainable water supply while reducing cost burdens.

Several of the identified areas score in the 70th to 80th percentiles for linguistic isolation on CalEnviroScreen, indicating that many households have low levels of English proficiency. American Community Survey data indicates Spanish as the most commonly spoken language other than English in Corona, Home Gardens, and Norco. The communities near the center of the City of Corona contain many single-family residences near commercial areas. Away from the center of Corona, including Home Gardens, the neighborhoods contain higher density residential and more mixed use and industrial areas. These factors are important to consider while developing focused outreach and involvement. For example, outreach material language translation will likely be needed in areas with limited English proficiency. Multiple means of communication (e.g., flyers, posters) will be utilized, recognizing that some communication methods directed toward rate payers (e.g., water bill insert) might not reach community members in multi-unit buildings if water is included in their rent. See the "Focused Outreach" subsection in Section 4 for more details on strategy.

Potential Stakeholder Interests

When planning for public outreach and stakeholder involvement, it is important to consider the types of questions and concerns stakeholders and the public may have. To help guide involvement efforts, a list of potential stakeholders and example interests is presented below in Table 1.

Table 1 – Potential Stakeholder Interests

Category	**Example Interests**
Agriculture	• Crop prices • Groundwater production and use costs • Water supply availability • Water rights • Water quality • Land value
Business and Development	• Economic growth • Population growth

Table 1 – Potential Stakeholder Interests	
Category	**Example Interests**
	• Water rates • Water quality
Cultural Resources	• Community history • Cultural identity
Environment and Conservation	• Climate change • Groundwater dependent ecosystems • Habitat and species of concern • Managed/preserved land • Water quality
Equity and Environmental Justice	• Access to planning process • Benefits to disadvantaged communities • Greater exposure to air, land, and water contaminants • Water quality • Water rates
Water Suppliers	• Drought • Groundwater supply availability • Groundwater production and use costs • Potential future limits on groundwater pumping • Water quality

4. Steps for Preparation of the Groundwater Sustainability Plan

Activities for this Outreach and Stakeholder Involvement Communications Plan will take place during six steps of preparation for the GSP. The steps are outlined below with brief descriptions of the key activities in each step.

- **Step 1: Launch Project.** During project launch, the project team will organize itself for the GSP preparation and stakeholder outreach and involvement. Project planning and project management structures will be established.
- **Step 2: Conduct Baseline Studies**. In this step, describing the plan area and conducting baseline studies for the planning process will occur. This includes describing current and historical groundwater conditions and developing the hydrogeologic conceptual model, which describes the occurrence and movement of groundwater in the Temescal Subbasin.
- **Step 3: Build Water Budget and Numerical Model.** At this step, the water budget will be quantified, which describes the amount of water that flows in and out of the subbasin, estimates changes in the amount of stored groundwater, and discusses the annual sustainable yield of the subbasin. A numerical groundwater model of the subbasin will be built in this step to assist in groundwater budget quantification. The model will be used

to evaluate future sustainability in multiple scenarios (including projected growth and climate change) and to simulate potential projects and management actions.

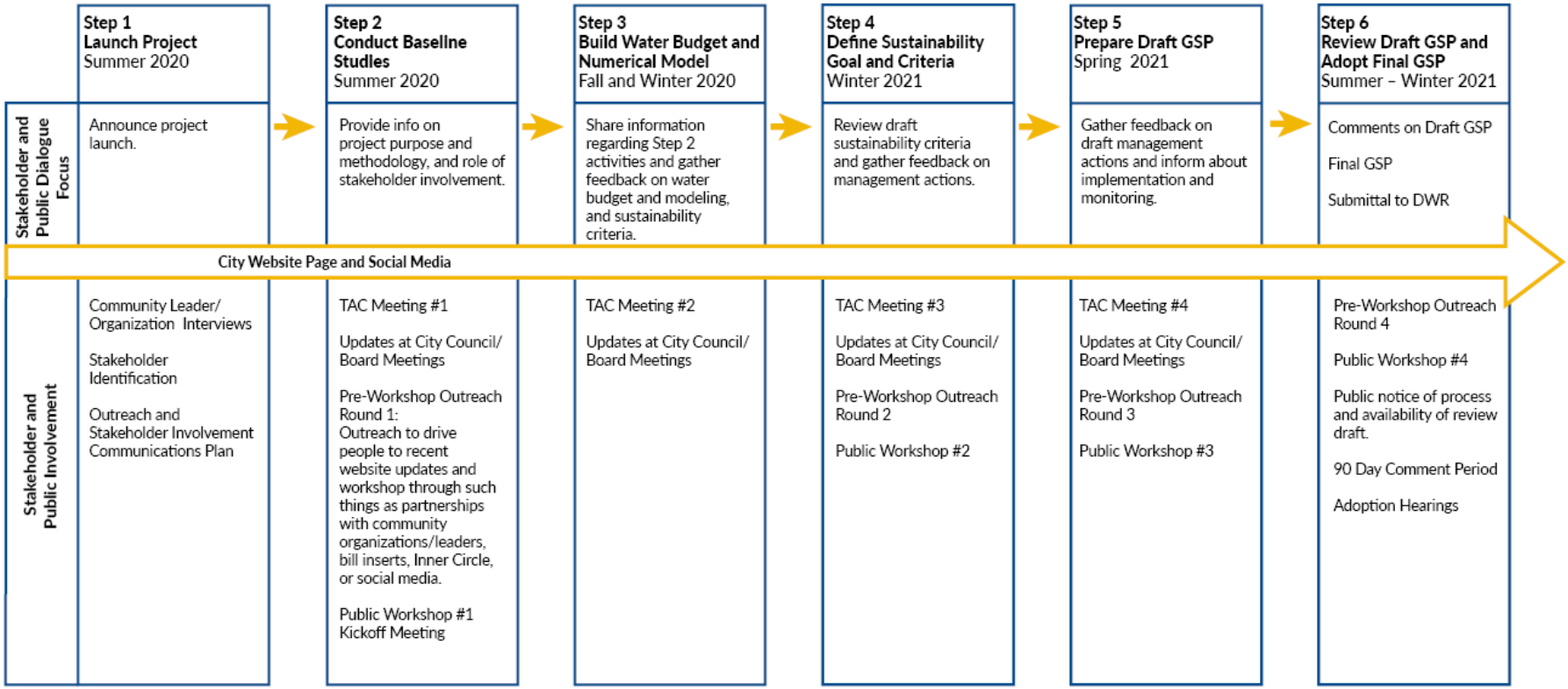
- **Step 4: Define Sustainability Goal and Criteria.** Building from the baseline studies, water budget, modeling, and input of stakeholders in the previous steps, the activities of this step will define the unique sustainability goal for the Temescal Subbasin. This goal and associated sustainable management criteria will define undesirable results and identify thresholds to avoid significant and unreasonable lowering of groundwater levels, reduction in storage, degraded water quality, land subsidence, and surface water depletion in the subbasin.
- **Step 5: Prepare Draft GSP.** This step will identify monitoring and management actions to fulfill the sustainability goal and sustainable management criteria and provide a plan for GSP implementation. The technical contents of the Draft GSP will then be completed.
- **Step 6: Review Draft GSP and Adopt Final GSP.** In the final step, the draft and final plan will be distributed for public review and comment.

See Section 4 for a process chart that aligns these planning steps with outreach and involvement activities.

5. Outreach and Involvement Process

The process chart on the next page provides an overview of how stakeholder and public outreach, and involvement activities align with the GSP preparation steps described in Section 3.

Temescal Subbasin GSP Outreach and Stakeholder Involvement Process



Outreach and Involvement Activities

Listed below are the anticipated stakeholder and public involvement activities that will occur during GSP preparation. They are listed in the order of appearance in the above process chart. The activities are designed to be flexible to meet evolving needs and issues during GSP preparation. Detailed logistics plans will be prepared prior to public workshops and technical advisory committee meetings, and will outline notification methods, formats, key messages, topics, and input and feedback opportunities.

Groundwater Sustainability Plan Webpage

Purpose: Host information about GSP preparation and related involvement activities.

Description: A webpage will be created on the City of Corona Department of Water and Power's website. It will host project information such as general SGMA/GSP information, project timeline, draft chapters, project updates, meeting materials and summaries, and FAQs. It will also allow visitors to sign up for the interested parties list.

Timing: All Steps.

Pre-Workshop Outreach

Purpose: Inform stakeholders about GSP preparation and drive attendance at public workshops.

Description: Pre-workshop outreach will use outreach materials and social media materials.

Outreach Materials

Potential outreach materials include one-page fact sheets (or similar materials such as project updates or notices) or bill insert announcements. The materials will be posted on the webpage, distributed to the interested parties list via email, and to the public using social media and community organizations. The timing of the creation and distribution of outreach materials will be tied to project milestones and public workshops.

Social Media, Websites, and Email

The GSA members will utilize their existing social media accounts to spread the word following completion of project milestones and in advance of public workshops. Posts on the City of Corona's Facebook, Twitter, Instagram, and/or Nextdoor pages will distribute information, outreach materials, and/or direct interested parties to the GSP webpage and public workshops. The City of Corona's Inner Circle email distribution list will likewise be used to disseminate information. The City of Norco will distribute information using its Facebook and Twitter accounts. Home Gardens County Water District has a webpage where workshop information will be posted. Stakeholder organizations will be encouraged to repost social media communications for wider distribution.

Timing: Step 2, Conduct Baseline Studies; Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP; Step 6, Review Draft GSP and Adopt Draft GSP

Focused Outreach

Purpose: Involve Disadvantaged Communities and Severely Disadvantaged Communities.

Description: Throughout GSP preparation, opportunities will be for outreach to Disadvantaged and Severely Disadvantaged Communities. In Step 1, the foundation will be laid by reaching out to community leaders and organizations to begin to build relationships and learn what strategies have been successful for them, how to overcome any existing barriers, and best methods for engaging in culturally and linguistically appropriate ways. Using this information and the previously discussed demographic information, gaps in pre-workshop outreach methods will be identified and addressed. Spanish translation of materials and interpretation at events will also be woven into outreach and involvement. Examples of effective outreach that has already been identified include posts on community social media pages and receiving information in the mail. Potential outreach materials could include customized social media posts for community organizations to share.

In Step 2, focused outreach, such as virtual stakeholder meetings, social media livestreams, social media posts, or flyer distribution, will be conducted, possibly in partnership with community groups and leaders. The purpose is to inform community members of their groundwater resources, how they are managed, and who manages them so that they are more comfortable in engaging in discussions later in GSP preparation. Basic information about the role of the GSP in groundwater management and public involvement will also be introduced. Potential outreach materials could include stakeholder meeting presentations, social media posts, or informational flyers.

Steps 3-6 will include continuation of pre-workshop outreach methods. It is also possible that some community members in disadvantaged communities may not have easy access to internet or cell phone data, so in-person meetings may be considered, if allowed by health authorities and community members are not excluded from public gatherings due to vulnerability to infection.

Timing: All Steps.

Technical Advisory Committee Meetings

Purpose: The purpose of the Technical Advisory Committee (TAC) is to contribute community and stakeholder perspectives and interests in GSP planning and GSP and SGMA implementation in the Temescal Subbasin.

Description: TAC members will provide input and feedback on GSP development and implementation and GSA policies based on their expertise, knowledge, resources, and understanding of their communities, environment, commerce, and applicable regulations. The GSA and the project team will consider the TAC's input throughout GSP preparation, along with input from the broader community, other stakeholders, and other government agencies involved in groundwater management and associated regulatory requirements.

TAC members represent the diverse interests of GSA-eligible agencies and groundwater uses and users. The intent of the Technical Advisory Committee is to contribute community and stakeholder perspectives and interests in GSP planning and GSP and SGMA implementation in the Temescal Subbasin.

See Appendix D for the protocols and operating principals document.

Timing: Step 2, Conduct Baseline Studies; Step 3, Build Water Budget and Numerical Model; Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP.

Public Workshops

Purpose: Create a forum to share project information with the public and stakeholders and provide input and feedback opportunities.

Description: Public workshops will allow stakeholders an opportunity to provide incremental input at meaningful points in GSP development. The workshop series will also help community members and other stakeholders understand the purpose, need, benefits, and issues associated with sustainable groundwater planning. The planned focus of these workshops is the following:

1. Kickoff (Step 2, Conduct Baseline Studies)
2. Criteria for sustainability (Step 4, Define Sustainability Goal and Criteria)
3. Preliminary evaluation of management actions (Step 5, Prepare Draft GSP)
4. Presentation of draft GSP (Step 6, Review Draft GSP and Adopt Draft GSP)

Public workshops could include elements such as a presentation, Q&A sessions, and various opportunities for attendees to provide input or feedback such as live polling, breakout groups, or comment cards. The first public workshop will likely take the form of a virtual meeting. The project team will assess the conditions for future workshops and weigh the risks and benefits of holding them in-person. Any in-person workshops will be held in a venue that maximizes accessibility and convenience for the communities of Corona, Home Gardens, and Norco.

Timing: Step 2, Conduct Baseline Studies; Step 3, Build Water Budget and Numerical Model; Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP; Step 6, Review Draft GSP and Adopt Draft GSP

City Council and Board of Directors Meeting Presentations

Purpose: Update the city councils of the Cities of Corona and Norco, and the Board of Directors of Home Gardens, and their respective communities, on GSP development and hold the GSP adoption hearing.

Description: The public will be able to hear updates on GSP preparation as an agenda item and provide comment periodically throughout the planning process and at the final adoption hearing.

Timing: Step 2, Conduct Baseline Studies; Step 3, Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP; Step 6, Review Draft GSP and Adopt Draft GSP

Public Comment Period

Purpose: Allow the public to comment on the GSP before adoption.

Description: According to SGMA, a GSA may adopt a GSP after a public hearing, held at least 90 days after providing public notice of a comment period. Draft GSP materials, including draft chapters and supporting documents will also be released for public review periodically throughout GSP preparation to facilitate additional public review.

Timing: Step 2, Conduct Baseline Studies; Step 3, Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP; Step 6, Review Draft GSP and Adopt Draft GSP

Inter-basin Coordination

Purpose: SGMA requires coordination of specific GSP elements between connected basins and/or subbasins.

Description: The GSA and their technical consultants will communicate with the GSAs, agencies, and/or technical consultants in and for neighboring basins and subbasins to coordinate water budget and sustainability criteria. This will facilitate consistency in estimates of flow across basin boundaries and make sure that sustainable basin management does not adversely affect neighboring basins.

Timing: Step 2, Conduct Baseline Studies; Step 3, Step 4, Define Sustainability Goal and Criteria; Step 5, Prepare Draft GSP; Step 6, Review Draft GSP and Adopt Draft GSP

6. Evaluation and Adaptation

This is a working plan, recognizing that an outreach and involvement plan should allow for evaluation and adaptation. After each public workshop, a discussion and evaluation of outreach and involvement activities will occur at internal GSA workgroup meetings to determine what went well, what could be improved, and what the key lessons learned are.

To help answer those questions, the outreach and involvement plan objectives will be reviewed:

- Were all stakeholders informed of the GSP development process, including purpose, opportunities and issues, core recommendations, and timeline?
- Were stakeholders and the public provided meaningful opportunities to learn, ask questions, and provide input?
- Were the many diverse communities and stakeholders of Corona, Norco, and Home Gardens, involved? Were tailored approaches used to reach specific populations like Disadvantaged Communities?

- Was the process transparent such that stakeholders and the public can understand what important discussions are taking place, how they can participate in them, and how input is being used ensured?

The following information can also be collected and used as indicators:

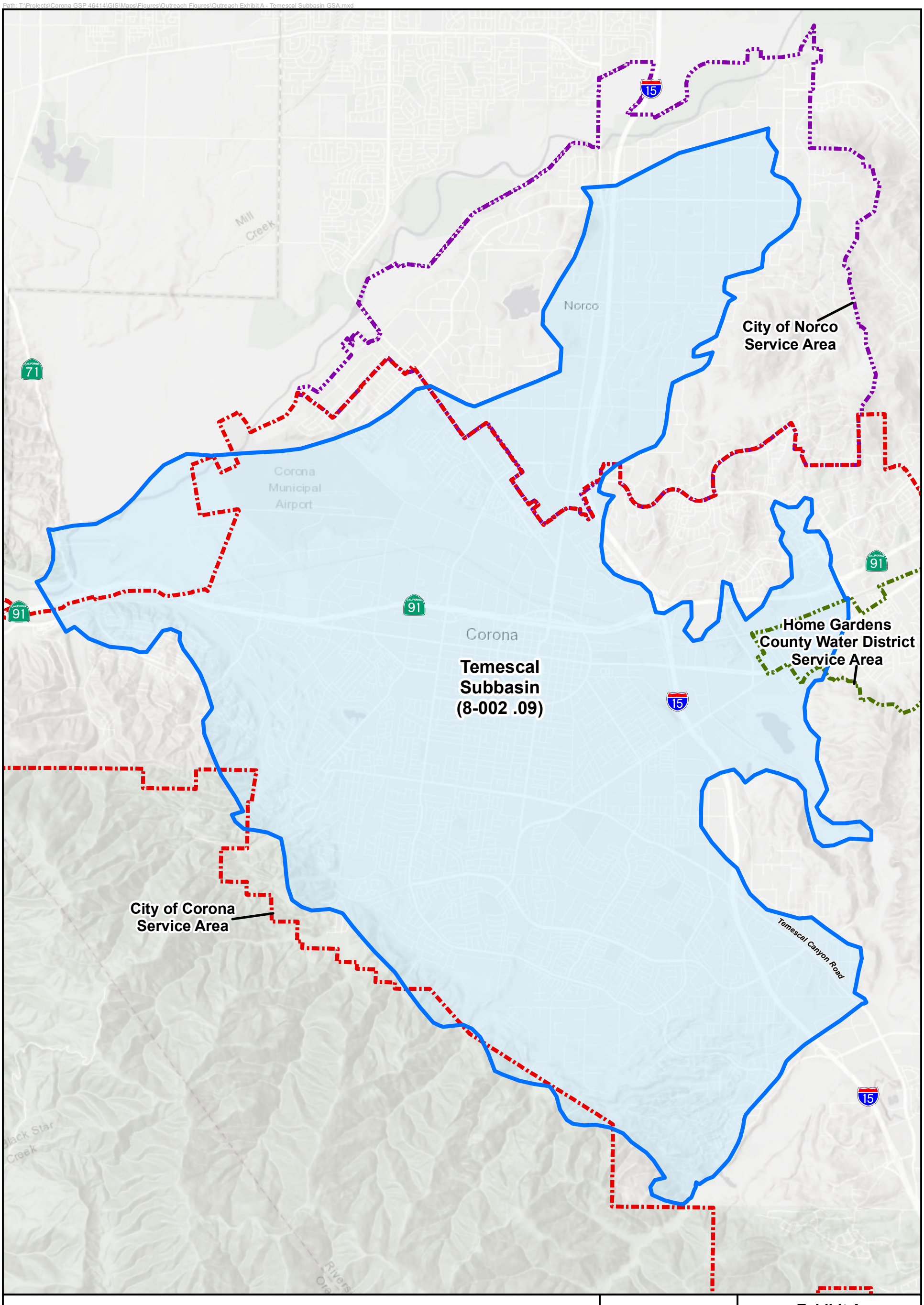
- **Interested Party List Additions:** Number of contacts added to the list since the last workshop.
- **Social Media Interactions:** Number of likes, comments, and shares.
- **Public Workshops Attendance:** Number of attendees and change over time.
- **Public Workshop Feedback:** Public workshops will end with a poll and/or short survey, asking attendees how they learned about the workshop, recommending means for getting the word out to other community members, what they liked about the format, and what they liked least**.**

The evaluation input will inform the adaptation of subsequent outreach and involvement activities.

Appendix A

Temescal Subbasin Map

Path: T:\Projects\Corona GSP 46414\GIS\Maps\Figures\Outreach Figures\Outreach Exhibit A - Temescal Subbasin GSA.mxd



Legend

- Temescal Subbasin Groundwater Sustainability Agency (GSA)
- City of Corona Service Area
- City of Norco Service Area
- Home Gardens County Water District Service Area
- Temescal Subbasin of the Upper Santa Ana Valley Groundwater Basin

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Exhibit A
Temescal Subbasin Groundwater Sustainability Agency

TODD GROUNDWATER

Appendix B

List of Interested Parties

TEMESCAL VALLEY SUBBASIN
GROUNDWATER SUSTAINABILITY AGENCY
LIST OF PARTIES INTERESTED IN THE TEMESCAL SUBBASIN

The following list satisfies Water Code Section 10723.2, which states: a GSA shall consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing Groundwater Sustainability Plans (GSPs). The list of interested parties presented below has been developed for the GSA. Many of the agencies identified below have already been contacted by the parties to the MOU for the GSA. The interests of all the agencies, organizations, and individuals identified below shall be considered during the development of the GSP for the GSA.

1. Local Water Districts within or adjoining the GSA:
    a. Metropolitan Water District of Southern California
    b. City of Riverside
    c. The MOU/GSA member agencies
    d. Western Municipal Water District (adjacent to the subbasin/GSA)
    e. City of Eastvale (adjacent)
    f. City of Chino Hills (adjacent)
    g. Jurupa Community Services District (adjacent)
    h. Temescal Valley Water District (adjacent)
    i. Eagle Valley Water District (adjacent)
    j. Orange County Water District (adjacent)
    k. Orange County Water Public Works Department (adjacent)
    l. Inland Empire Utilities Agency (adjacent)
    m. Chino Basin Water Management District (adjacent)

2. Holders of Overlying Groundwater Rights:
    a. There are a limited number of known agricultural, industrial, and domestic well owners that account for a very small proportion of subbasin annual groundwater use. These existing pumpers include the Dairy Farmers of America and other small producers. Known pumping is tracked on behalf of the Santa Ana River Watermaster, and these producers interests will be considered during the development of the GSP for the subbasin.
    b. Municipal and Industrial Well Operators
        i. The MOU/GSA member agencies are the only municipal well operators within the Temescal Subbasin
        ii. All American Asphalt, Dart Container Corporation of California, and Minnesota Mining and Manufacturing Corporation operate industrial supply wells in the subbasin. Known pumping is tracked on behalf of the Santa Ana River Watermaster, and these producers interests will be considered during the development of the GSP for the subbasin.

3. Surface Water Users
    a. Santa Ana Watershed Protection Authority
    b. Santa Ana River Watermaster. The Santa Ana River overlies portions of the Basin. Surface flows in the Santa Ana River are monitored by the Santa Ana River Watermaster. The Santa Ana River is adjudicated and minimum flows are required to reach the Prado Basin on an annual basis.
    c. The MOU/GSA member agencies

4. Environmental Users of Groundwater
    a. Riverside County Flood Control and Water Conservation District
    b. Santa Ana River Watermaster
    c. California Regional Water Quality Control Board - Santa Ana Region (8)

5. Local Land Use Planning Agencies
    a. Riverside County, Planning Department
    b. City of Corona
    c. City of Norco

6. The Federal Government
    a. United States Army Corps of Engineers (Prado Dam Management Area)
    b. United States Forest Service

7. California Native American Tribes
    a. Not present within the Temescal Subbasin or proposed GSA area.

8. Disadvantaged Communities
    a. There are 21 Census block groups within the City of Corona where median income is below the threshold for disadvantaged communities, and 13 of these block groups are below the severely disadvantaged community income threshold.
    b. There are 4 Census block groups within the Home Gardens County Water District where median income is below the threshold for severely disadvantaged communities.

9. CASGEM Agencies
    a. Western Municipal Water District is the monitoring entity responsible for CASGEM program in the Temescal Subbasin

Appendix C

Disadvantaged and Severely Disadvantaged Communities Map

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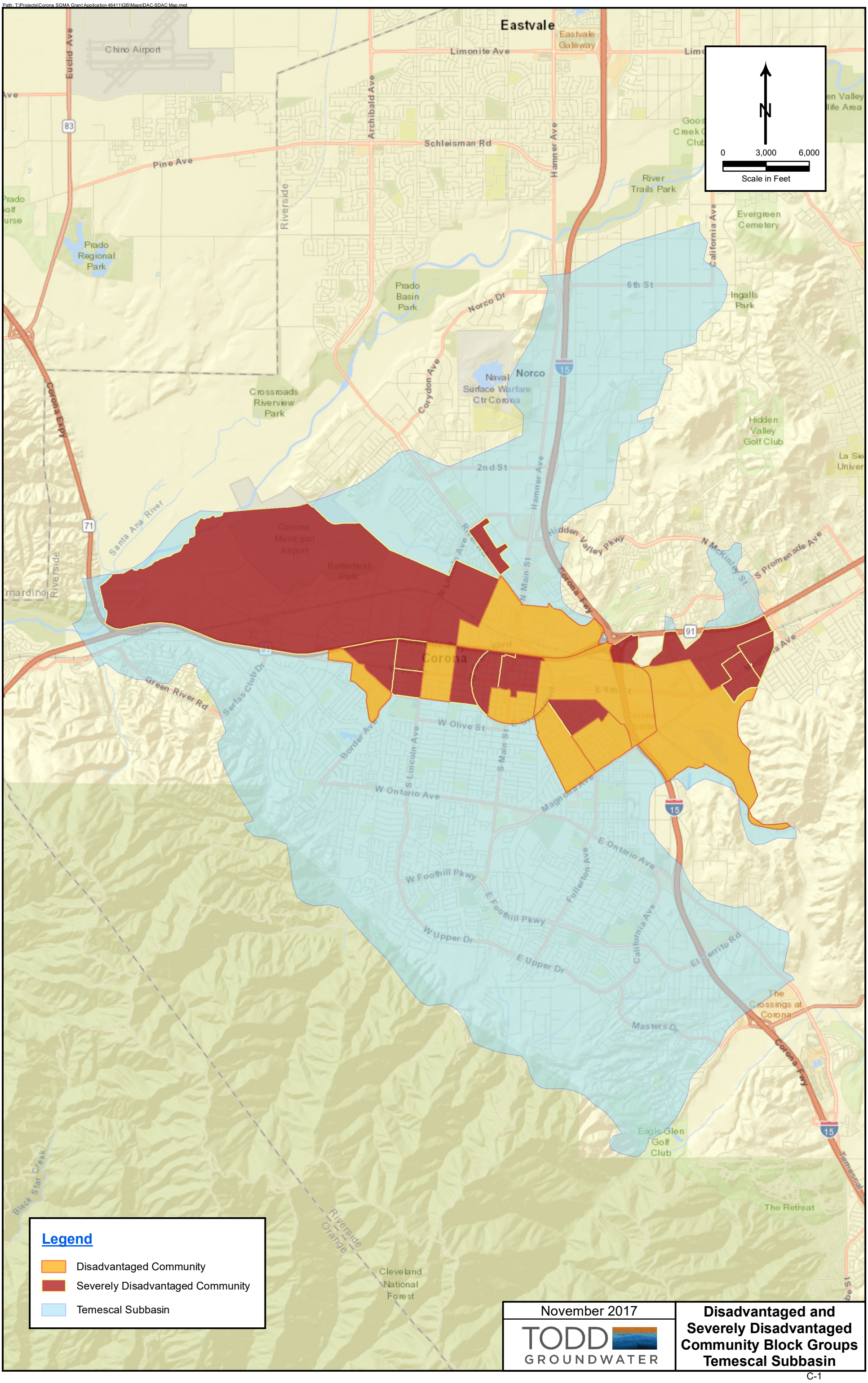

Appendix D

Protocol and Operating Principles for Temescal GSA Technical Advisory Commitee

Protocols and Operating Principles for Temescal Subbasin Groundwater Sustainability Agency Technical Advisory Committee

August 7, 2020

1. INTRODUCTION

The State of California Sustainable Groundwater Management Act (SGMA), passed in 2014, calls for the development and implementation of groundwater sustainability plans for all basins determined high and medium priority by the California Department of Water Resources. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans with a deadline of 2042. SGMA gives local agencies authority to define and plan for achieving and maintaining sustainable groundwater management while avoiding specific undesirable results through the preparation and implementation of a Groundwater Sustainability Plan (GSP).

The Temescal Subbasin, a medium-priority basin, lies mostly within the boundaries of the cities of Corona and Norco, and Home Gardens, an unincorporated area of Riverside County within the City of Corona's sphere of influence. The Temescal Subbasin GSA (GSA) was formed by a Memorandum of Understanding among the City of Corona, the City of Norco, and the Home Gardens County Water District. The GSA is dedicated to participating in the collective goals of groundwater sustainability and good basin management through the development of a GSP for the Temescal Subbasin.

GSAs must consider the interests of all beneficial uses and users of groundwater and provide opportunities for public engagement and the Temescal Subbasin GSA is seeking active involvement of diverse social, cultural, and economic elements of the population. In order to achieve those requirements and provide more opportunities for stakeholders to represent diverse interests and provide input to inform GSP preparation, the GSA chose to form a Technical Advisory Committee (TAC). This document establishes the protocols and operating principles and records the charge and role of the TAC in GSP preparation, collaborative principles, meeting logistics information, and additional considerations for productive meetings where all TAC members can participate equally and effectively.

2. CHARGE

The purpose of the TAC is to provide input and guidance to the staff and consultant team of the GSA who are preparing the GSP. At the request of the GSA, the TAC members will provide input and feedback on GSP development and implementation and GSA policies based on their expertise, knowledge, resources, and understanding of their communities, environment, commerce, and applicable regulations. The GSA and the project team will consider the TAC's input throughout GSP preparation, along with input from the broader community, other stakeholders, and other government agencies involved in groundwater management and associated regulatory requirements.

Additionally, Technical Advisory Committee members represent the diverse interests of GSA-eligible agencies and groundwater uses and users. The intent of the Technical Advisory Committee is to contribute community and stakeholder perspectives and interests in GSP planning and GSP and SGMA implementation in the Temescal Subbasin.

The Technical Advisory Committee will provide review and guidance to the GSA on groundwater-related issues during the development of the GSP that may include:

- Sustainability goals and objectives
- Monitoring programs
- Annual work plans and reports
- Modeling scenarios
- Inter-basin coordination activities
- Projects and management actions to achieve sustainability
- Community outreach, including engagement with disadvantaged communities
- Local regulations to implement SGMA
- General advice

3. ROLES AND RESPONSIBILITIES

To accomplish the above charge, Technical Advisory Committee members agree to the following:

- Contribute input towards long-term sustainable management of the Temescal Subbasin based on their knowledge and expertise in policy, technical, and community matters
- Communicate to other stakeholders and community members about the GSA, GSP process, and SGMA
- Work collaboratively with others on the Technical Advisory Committee
- Commit time needed to review material and participate in ongoing discussions
- Collectively reflect diversity of interests
- Represent constituents' perspectives, but also consider broader community input and input from other members during Technical Advisory Committee meeting discussions

- Participate in all Technical Advisory Committee meetings for the entire planning process
- Partner with the GSA and project team in publicizing public involvement activities

4. PARTICIPATION AND COLLABORATION PRINCIPLES

All Technical Advisory Committee members will work together to create a collaborative, problem-solving environment. The preferred deliberation process is a collaborative process whereby Technical Advisory Committee members choose to cooperate to achieve shared and/or overlapping objectives, in support of the GSA's direction for the creation of a GSP for the Temescal Subbasin.

By agreeing to serve on the Technical Advisory Committee, members commit to the following principles:

- Commit to a good faith effort.
- Use common conversational courtesy.
- All ideas and point of view have value. All ideas have value in this setting. We are looking for innovative ideas. The goal is to achieve understanding. Simply listen, you do not have to agree. If you hear something you do not agree with or you think is "silly" or "wrong," please remember that the purpose of the forum is to share ideas.
- Be honest, fair and as candid as possible. Help others understand you and work to understand others.
- Share relevant information.
- Avoid editorials. It will be tempting to analyze the motives of others or offer editorial comments. Please talk about *your own* ideas and thoughts. Avoid commenting on why you believe another participant thinks something.
- Honor time and be concise. People's time is precious; treat it with respect.
- Think innovatively and welcome new ideas. Creative thinking and problem solving are essential to success. Attempt to think about the problem in a new way.
- Seek solutions for all – help to integrate each other's interests into creative solutions that address diverse needs.
- Invite humor and good will.

Meetings will be conducted using a facilitator, who will:

- Maintain a neutral position during Technical Advisory Committee discussions.
- Work to ensure that all Technical Advisory Committee members have the opportunity to participate equally.
- Guide meeting discussions per the agenda and manage time.
- Provide dialogue activities as needed for productive outcomes.
- Enforce the Technical Advisory Committee collaboration principles stated above.
- Ask "why" to clarify interests.

- Track actions, next steps, and deadlines.
- Participate in agenda preparation as part of meeting the above responsibilities and integrating the Technical Advisory Committee in the planning process.

5. MEMBERSHIP

The intent of the Technical Advisory Committee is to provide broad participation and advice to the GSA. To facilitate effective meetings and manage group size, the Technical Advisory Committee will not exceed 18 members.

The GSA Staff (made up of City of Corona Department of Water and Power staff) will manage its membership and composition and the Staff may make appointments from time-to-time after receiving Technical Advisory Committee recommendations from interested parties to serve on Technical Advisory Committee. When an organization's representative is no longer able to serve, the organization will recommend a new representative to the Technical Advisory Committee. If the organization withdraws from the Technical Advisory Committee, the Technical Advisory Committee and Staff will identify another organization and corresponding representative to fill that seat and recommend the organization to the GSA for appointment.

The Technical Advisory Committee strives to include a range of interests in groundwater in the Temescal Subbasin as outlined in SGMA. Technical Advisory Committee members live in the Temescal Subbasin or represent organizations with a presence or agencies with jurisdiction in the Subbasin, including:

- All Groundwater Users
- Municipal Well Operators, Public Utilities Commission-Regulated Water Companies, and Private and Public Water Systems
- County and City Governments
- Planning Departments/Land Use
- Local Landowners
- Disadvantaged Communities
- Business and Agriculture
- Rural Residential Well Owners
- Environmental Users
- Water Supply and Management Surface Water Users (if connection between surface and ground water)

No Technical Advisory Committee member shall be compensated by the GSA for preparation for or attendance at meetings of the GSA or any committee created by the GSA. The fiscal responsibility of the Technical Advisory Committee falls under the oversight of the GSA.

6. REQUEST FOR NO USE OF ALTERNATES

The GSA requests that once each Technical Advisory Committee member identifies its representative, each representative will commit to attending all meetings in person for the duration of the study. The meetings will build on each other, where discussions in one meeting will shape and inform the discussions at the next meeting. Because continuity is only optimized by consistency in attendance and participation by the representatives, the GSA has established a "no alternate" policy.

7. TERM OF SERVICE

The Technical Advisory Committee is being formed with an understanding that it will serve through submittal of the GSP by January 31, 2022.

8. MEETING LOGISTIC AND COMMUNICATION

Project Duration

The final GSP will be submitted to the State of California Department of Water Resources by January 31, 2022.

Meeting Schedule and Length

There will be four Technical Advisory Committee meetings, currently scheduled for Summer 2020, Fall, 2020, Winter 2021, and Spring 2021. Meetings will last 2 to 4 hours.

Meeting Location

The first Technical Advisory Committee meeting will take place as a virtual meeting online, largely due to restrictions implemented in response to COVID-19. The GSA and project team will assess the latest State and local social distancing requirements and guidance to determine in-person and online venues for future meetings.

Agendas

Agendas will be distributed via email one week in advance of each meeting.

Meeting Summaries

Meeting summaries will be prepared and distributed.

9. COMMUNICATION & MEDIA

GSA Staff will serve as primary contacts for all communication, outreach and media. At the request of the GSA, or Staff, the Technical Advisory Committee may advise on outreach and community engagement.

Media Interaction

Technical Advisory Committee members reserve freedom to express their own opinions to media representatives, but not the opinions of others. The temptation to discuss someone else's statements or position should be avoided. Participants can refer media inquiries to Technical Advisory Committee members for individual comments.

If contacted by the press or an external party concerning discussions, participants are asked to:

- Point out that they are not speaking on behalf of the Technical Advisory Committee, unless specifically authorized by the Technical Advisory Committee to do so
- Present their views only and conscientiously refrain from expressing, characterizing or judging the view of others
- Avoid using the press as a vehicle for negotiation

Member-To-Member Communications

Technical Advisory Committee members may want to share information and documents with other members during the study process. To ensure that all members have the same information available to them, all documents are to be distributed through the established point of contact, who is listed at the end of this document.

The Technical Advisory Committee is intended to be a collaborative experience, in which members work through ideas, issues and solutions in person to gain mutual understanding. As such, Technical Advisory Committee members agree to avoid engaging in email "dialogue" with other members outside the meeting process, and instead commit to using the Technical Advisory Committee meetings for dialogue and discussion purposes.

10. OPEN MEETINGS

All Technical Advisory Committee meetings will be open to the public and announced in advance on the project website. Meeting materials and summaries for each meeting will be posted on the project website.

11. POINT OF CONTACT FOR TECHNICAL ADVISORY COMMITTEE MEMBERS

The established point of contact for Technical Advisory Committee members' questions, suggestions, and input is Melissa Estrada-Maravilla, who is reachable by email at Melissa.Estrada-Maravilla@CoronaCA.gov or phone at 951.736.2479.

APPENDIX E

List of Public Meetings During GSP Development and GSP Comments and Responses

Public Meetings Held During Development of the Temescal Basin Groundwater Sustainability Plan

August 19, 2020 – Temescal Basin Technical Advisory Committee Meeting 1

November 18, 2020 – Temescal Basin Technical Advisory Committee Meeting 2

February 17, 2021 – Temescal Basin Technical Advisory Committee Meeting 3

June 16, 2021 – Temescal Basin Technical Advisory Committee Meeting 4

September 29, 2020 – Public Workshop 1 for Temescal Basin Groundwater Sustainability Plan Development

March 2, 2021 – Public Workshop 2 for Temescal Basin Groundwater Sustainability Plan Development

July 8, 2021 – Public Workshop 3 for Temescal Basin Groundwater Sustainability Plan Development

APPENDIX F

Summaries of Technical Advisory Committee Meetings

Technical Advisory Committee Meeting #1

Meeting Summary

Wednesday, August 19, 2020
2:00 p.m. – 4:00 p.m.
Location: Zoom Virtual Meeting

Attendees

Technical Advisory Committee Members

- Ava Moussavi, Riverside County Flood Control and Water Conservation District
- Chad Blais, City of Norco Public Works Department
- David Vigil, Home Garden County Water District
- Eric Lindberg, California Regional Water Quality Control Board – Santa Ana Region
- Jacque Casillas, Vice Mayor, City of Corona
- Katie Hockett, City of Corona Department of Water and Power
- Roberta A. Reed, 3M Industrial Mineral Products Division
- Timothy Ballon, All American Asphalt
- Tom Moody, City of Corona Department of Water and Power
- Wes Speake, Councilmember, City of Corona

City of Corona Department of Water and Power Staff

- Kristian Alfelor
- Melissa Estrada-Maravilla

Consultant Team

- Chad Taylor, Todd Groundwater
- Phyllis Stanin, Todd Groundwater
- Alyson Scurlock, Kearns & West
- Jack Hughes, Kearns & West
- Joan Isaacson, Kearns & West

Summary

1. Welcome and Introductions

Tom Moody, General Manager at the City of Corona Department of Water and Power, welcomed all to the first meeting of the Temescal Groundwater Sustainability Agency Technical Advisory Committee (TAC). He introduced Todd Groundwater, Carollo Engineers, and Kearns & West as the consultants assisting the Temescal Groundwater Sustainability Agency (Temescal GSA) with preparation of the Temescal Groundwater Sustainability Plan (Temescal GSP) and meeting facilitation.

2. Overview of Meeting Agenda

Joan Isaacson serving as TAC meeting facilitator, Kearns & West, led roundtable introductions for all attending. Isaacson thanked all for attending since their expertise, track record of working collaboratively with other agencies and organizations, and relationships with communities and other stakeholders would be very valuable throughout preparation of the Temescal GSP. She then reviewed the meeting agenda (see Appendix A), noting that the meeting would focus on an introduction to the Sustainable Groundwater Management Act (SGMA), Temescal GSP workplan and schedule, Outreach and Stakeholder Involvement Communications Plan, and TAC members' roles.

3. Orientation to the Sustainable Groundwater Management Act

Chad Taylor, Senior Hydrogeologist at Todd Groundwater, presented the background and purpose of SGMA, an overview of the Temescal Basin and Temescal GSA, and the Temescal GSP development timeline. SGMA is California State legislation that establishes requirements and specifies deadlines for achieving and maintaining groundwater sustainability. These requirements include forming a GSA and preparing a GSP to facilitate local groundwater management informed by stakeholders. SGMA requires that groundwater basins designated as medium (such as the Temescal Basin) or high priority form GSAs and file GSPs by January 31, 2022 and subsequently demonstrate sustainable groundwater management by 2042. See page 10 in Appendix B for map of the Temescal Basin. Sustainability, as defined in SGMA, is the local management and use of groundwater in a way that can be maintained without experiencing undesirable results. SGMA requires evaluation of undesirable results in consideration of six sustainability indicators which are chronic lowering of groundwater levels; reduction of groundwater storage; degradation of water quality; depletion of interconnected surface water affecting beneficial uses; land subsidence affecting land uses; and seawater intrusion.

Taylor explained that the City of Corona, the City of Norco, and Home Gardens County Water District formed the Temescal GSA in 2017 through a memorandum of understanding. The Temescal GSA will work with the California Department of Water Resources (DWR), the TAC, consultants, residents, local public, and other agencies and stakeholder organizations during the Temescal GSP preparation. The Temescal GSA has begun the process of developing and implementing a GSP for the Temescal Basin, including data gathering and review, preparation of a Draft Plan Area Chapter, and preparation of an Outreach and Stakeholder Involvement Communications Plan. For more information on the Temescal GSA, see pages 11 through 12 in Appendix B.

Discussion/Q&A

The team opened the floor for questions and discussion. Taylor listed two discussion questions for consideration: 1) What have you heard about groundwater and/or SGMA and what do you think are some important groundwater management issues? 2) Are you aware of any data or studies we should review during GSP preparation? Discussions, comments, and questions are summarized below.

- The State of California requires local municipal organizations to serve as GSA partners, so private companies are not eligible, but they can participate in GSP preparation in other ways.
- The Temescal Basin has a current Groundwater Management Plan and the majority of water after a rainfall event goes to local recharge. This is interesting, and we should find a way to inform the public on how this happens in the Temescal Basin, so they can know about it and understand it.

- The fact sheet sent prior to this meeting was great. The public should know that the GSA agencies have been and are good stewards of our groundwater.
- Other GSPs have considered what it would mean to decrease water use in the future and that is a concern this TAC should think about.
- It is important that TAC members work with and train others in their agency or organization in consideration of the 2042 sustainability mark so that there is capacity for someone to provide input over 20 years.
- Let's not shy away from talking about Direct Potable Reuse and Indirect Potable Reuse projects as part of this process. They can be hard to talk about but should be talked about sooner rather than later as they are a big part of groundwater replenishment.

4. Summary of Groundwater Sustainability Plan Workplan and Schedule

Taylor provided a summary of the Temescal GSP workplan and schedule. The Temescal GSP will build from past and existing management activities, including the 2008 Groundwater Management Plan. Major Temescal GSP elements include data compilation; plan area; hydrogeologic conceptual model; groundwater model; sustainability goals and criteria; management actions, projects, and monitoring; and plan development. Data compilation and a Draft Plan Area Chapter are already complete. The next steps are to develop the hydrogeological conceptual model, assess current and historical groundwater conditions, and construct a numerical groundwater model. These will be used to calculate groundwater budgets and sustainable yield, so that it is known how much groundwater is available for use. After that comes the creation of sustainability goals and criteria, which define what sustainability means in the Temescal Basin. Next, management actions will be identified to meet sustainability goals and criteria and a monitoring program will be established.

Taylor reviewed the Temescal GSP preparation schedule noting that there will be four TAC meetings total and three public workshops and a presentation of the Draft GSP during the process. The Draft Temescal GSP will be made available for public review in Summer 2021. The final Temescal GSP will be completed by Fall 2021 prior to submittal to DWR. See pages 13 through 16 in Appendix B for more information on the Temescal GSP workplan and schedule.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

5. Outreach and Involvement

Jack Hughes, Kearns & West, provided an overview of the purpose, objectives, and components of the Outreach and Stakeholder Involvement Communications Plan. The purpose is to provide a framework for integrating public and stakeholder outreach and involvement into the Temescal GSP preparation. The objectives include making sure all stakeholders are informed of the Temescal GSP process and how they can get involved; providing meaningful opportunities for stakeholders and the public to learn and provide input; involving the diverse communities and stakeholders of Corona, Norco, and Home Gardens; and ensuring a transparent process. An important component is involving communities and stakeholders with diverse groundwater interests.

Hughes reviewed the planned outreach and involvement activities included in the plan and how they would be aligned with the Temescal GSP planning steps. The public will have opportunities to get information and provide comment during the public workshops and/or during the presentation on Temescal GSP updates provided during the City Council or Board of Directors meetings of each

respective Temescal GSA member. There will also be three public workshops. Each workshop will be accompanied by several methods of pre-workshop outreach to boost attendance and circulate information such as emails, social media posts, and distributing fact sheets.

Hughes noted the importance of engaging underrepresented communities throughout the Temescal GSP process. He displayed areas in the Temescal Basin that DWR has identified as Disadvantaged Communities and Severely Disadvantaged Communities. The consultant team has talked with local community leaders to discuss strategies and best practices for conducting engagement with underrepresented communities and what community organizations will be important to partner with.

Hughes then overviewed the outreach materials being developed in preparation for the first public workshop. The Temescal GSA website (www.CoronaCA.gov/Groundwater) will serve as a hub for project information and updates. It will include a comment form for anyone to contribute input during the Temescal GSP process. The Temescal GSA fact sheet (see Appendix C) introduces broader groundwater concepts to bring public awareness to local groundwater resources in addition to information about SGMA and the Temescal GSP. The first public workshop is tentatively scheduled for September 29, 2020 and will be held virtually. See pages 17 through 24 in Appendix B for more information on outreach and involvement.

Discussion/Q&A

Hughes posed the following questions for discussion: 1) How can we reach more of your community members, constituents/other stakeholders, and the public in our pre-workshop outreach? 2) How might you be able to help us spread awareness of the first public workshop?

- The TAC discussed what stakeholders had already been identified. A working list has been developed that includes many agencies, businesses, private pumpers, and other stakeholders upstream and downstream, as well as those in neighboring basins. TAC members can suggest additional interested parties to add. The website, via the comment page, provides an additional option for anyone interested in signing up for updates.
- The TAC discussed if the project team had target numbers for engagement in underrepresented communities in mind. There are no target numbers for engagement.
- One question asked was, how many members of the public attended public meetings for other GSPs? A member of the consultant team stated that the public attendance at public meetings for other GSPs varies. Depending on the Basin, attendance has ranged from zero members of the public and several agency representatives to many members of the public and agency representatives.
- The idea of a focus group was also mentioned. One suggestion was to incentivize participation by offering gift cards or coupons. People in line at bi-weekly food drives at city hall could be engaged. Another idea was to encourage people to answer a one-question survey that drives them to the project website. TAC members discussed options for what that question could be.
- The TAC noted that the fact sheet was very good but might be a little too dense, and it could maybe be reduced to one-page with English on one side and Spanish on the other.

6. Role of the Technical Advisory Committee

Isaacson explained the role of the TAC and reviewed the TAC Protocols and Operating Principles document (see Appendix D), which was provided to TAC members before the meeting. The general purpose of the TAC is to provide input and guidance to the Temescal GSA and consultant team during

the development of the Temescal GSP. TAC members represent diverse groundwater interests and will work collaboratively to contribute input towards long-term sustainable management of the Temescal Basin, communicate with additional stakeholders and community members about the Temescal GSA, Temescal GSP process, and SGMA, review material and participate in ongoing discussions, and help to publicize public involvement activities. TAC members were asked to provide a general confirmation of the operating protocols and to reach out to the project team contact (Melissa Estrada-Maravilla) if they saw any red flags.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

7. Public Comment

No members of the public provided comment.

8. Next Steps and Final Comments

Isaacson summarized next steps for the TAC members. Following this meeting, Estrada will send out the Draft Plan Area Chapter of the Temescal GSP for TAC members to review. The consultant team will continue preparing the technical analyses. Comments on the Draft Plan Area Chapter of the Temescal GSP are due to the GSA on September 4, 2020. Additional next steps are preparing for the upcoming public workshop tentatively scheduled for September 29, 2020 and the next TAC meeting on November 18, 2020.

Discussion/Q&A

- The time for the first public workshop was discussed. A start time before 6:00 p.m. would be good as it is difficult to conduct a virtual public workshop later in the evening. Also, the timing of future workshops could be alternated to see what works best.

Temescal Subbasin Groundwater Sustainability Agency

Technical Advisory Committee

August 19, 2020

carollo
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KEARNS WEST

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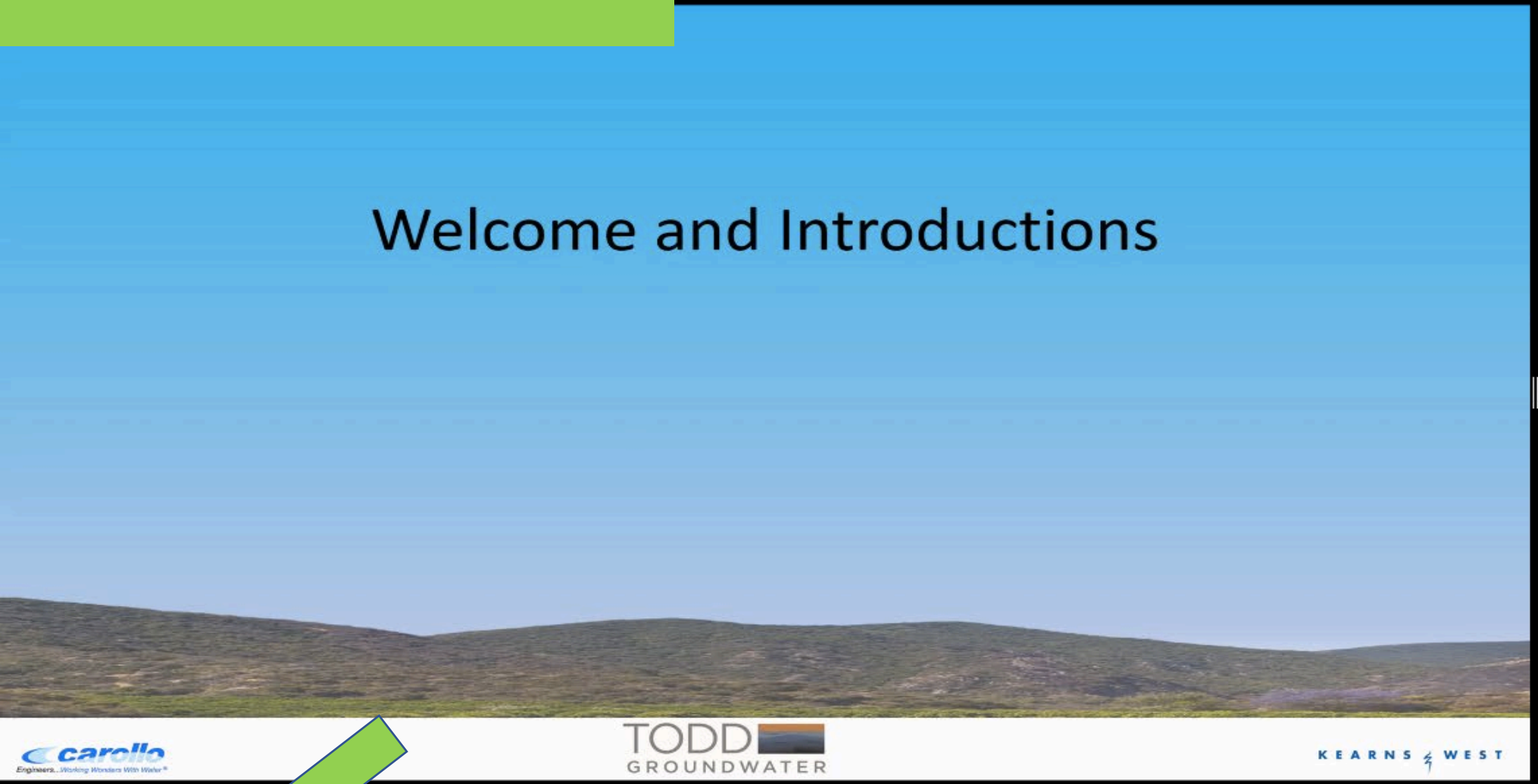
Gallery View

How to Mute and Start/Stop Video



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Share Screen

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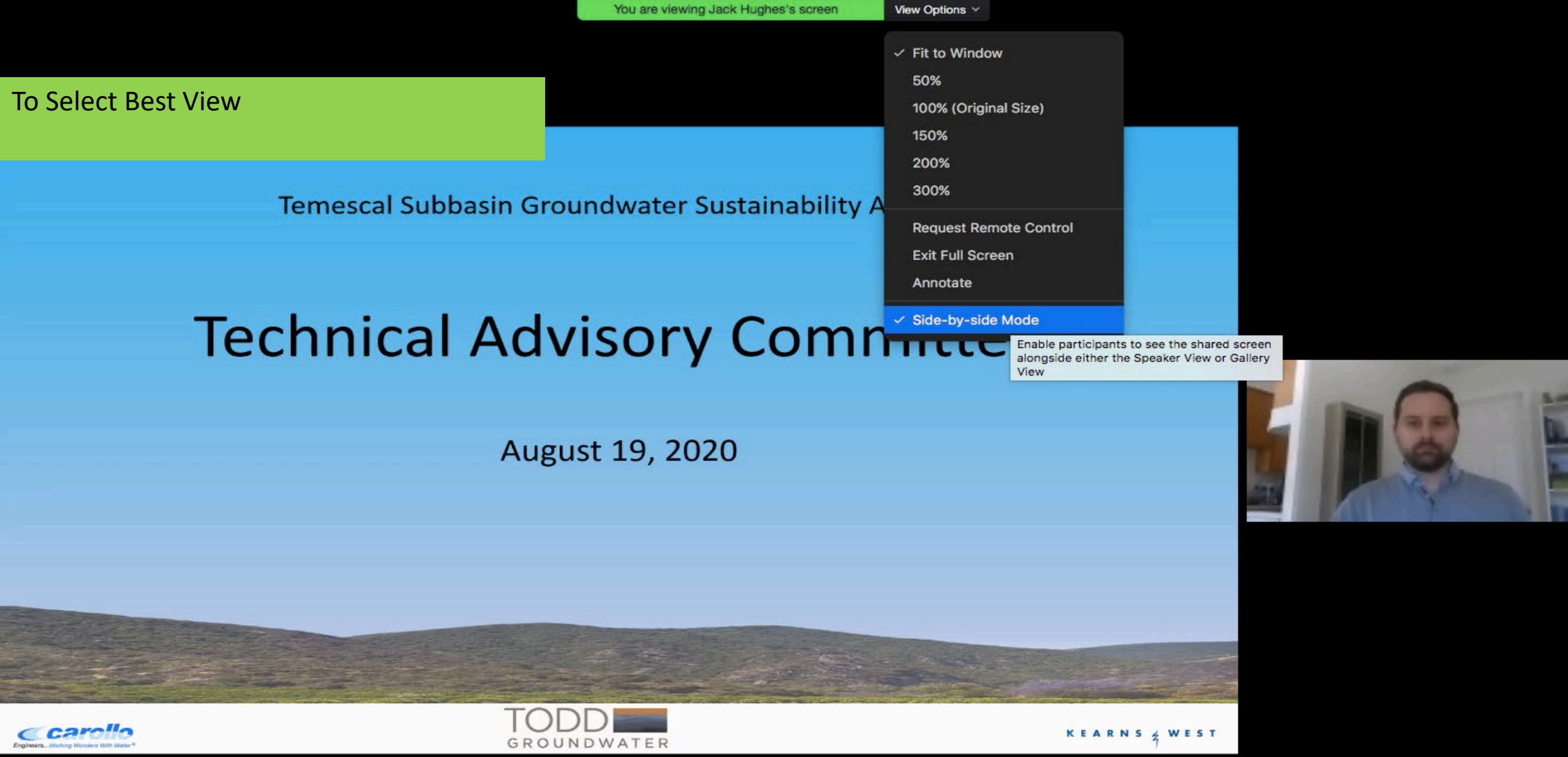

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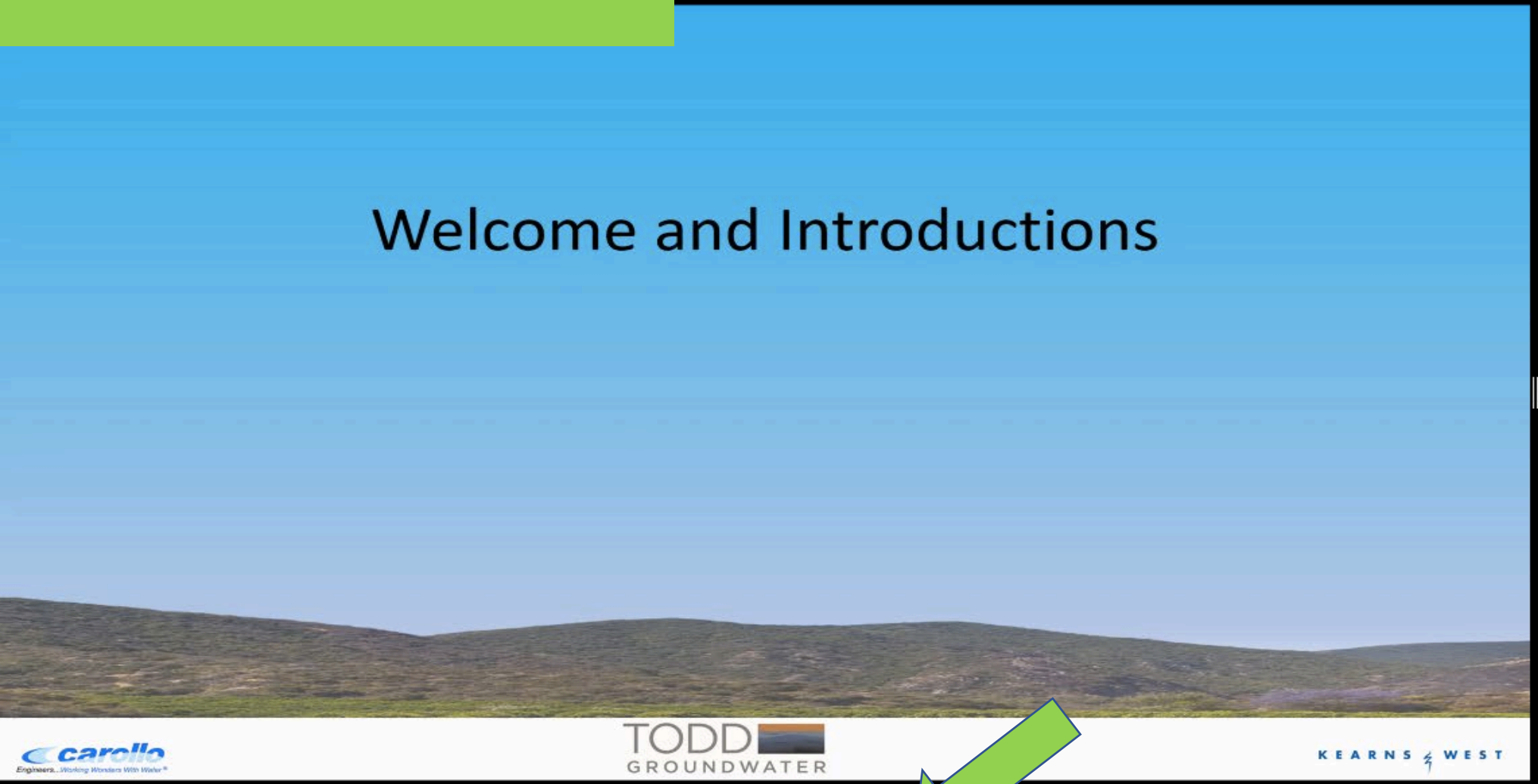

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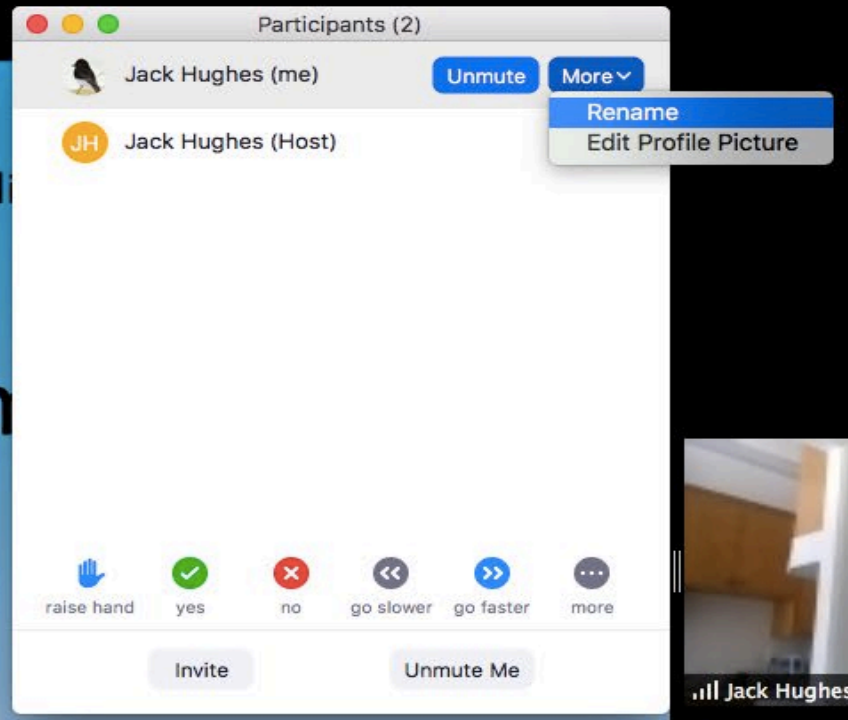
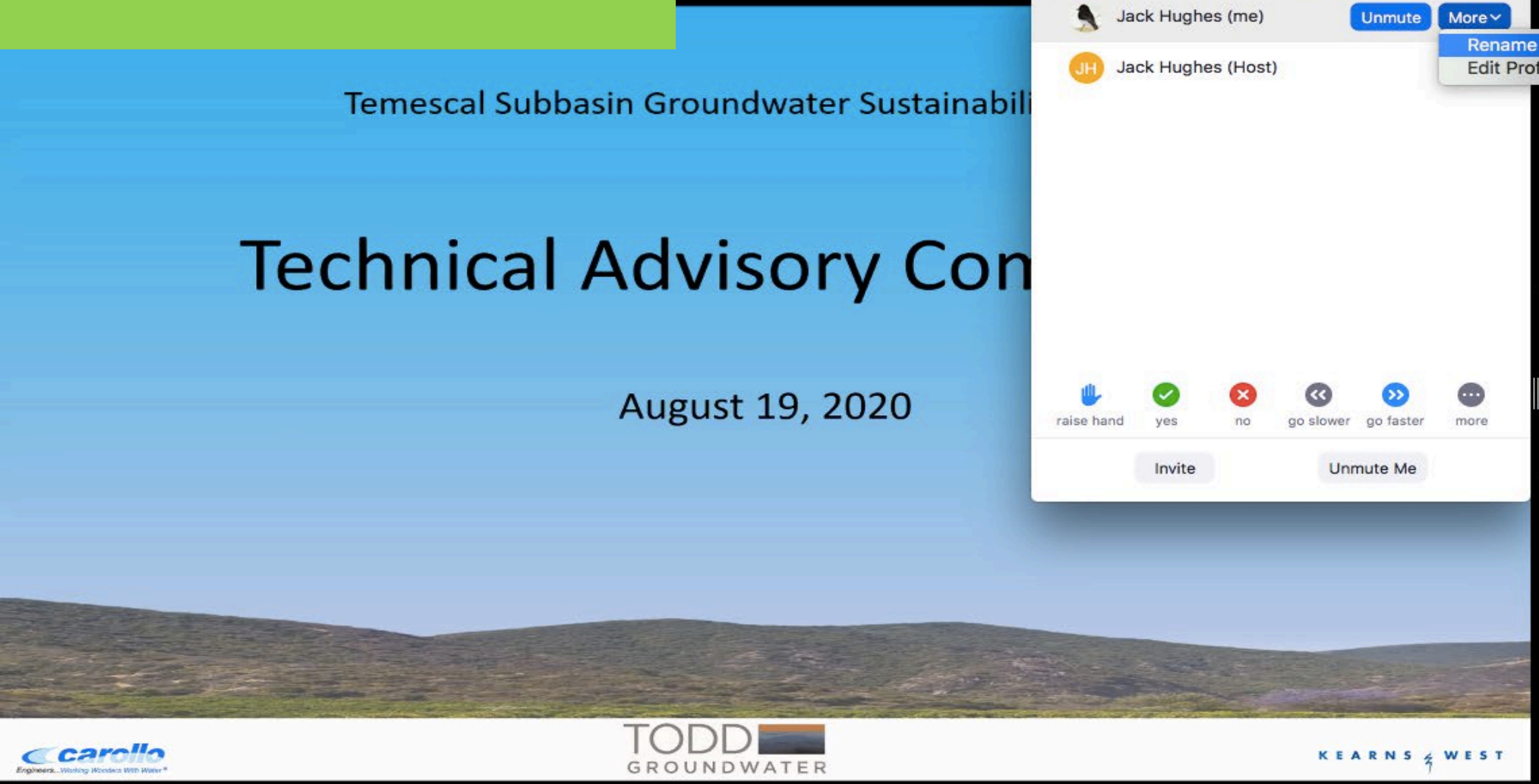
How to Rename Yourself – Step 2





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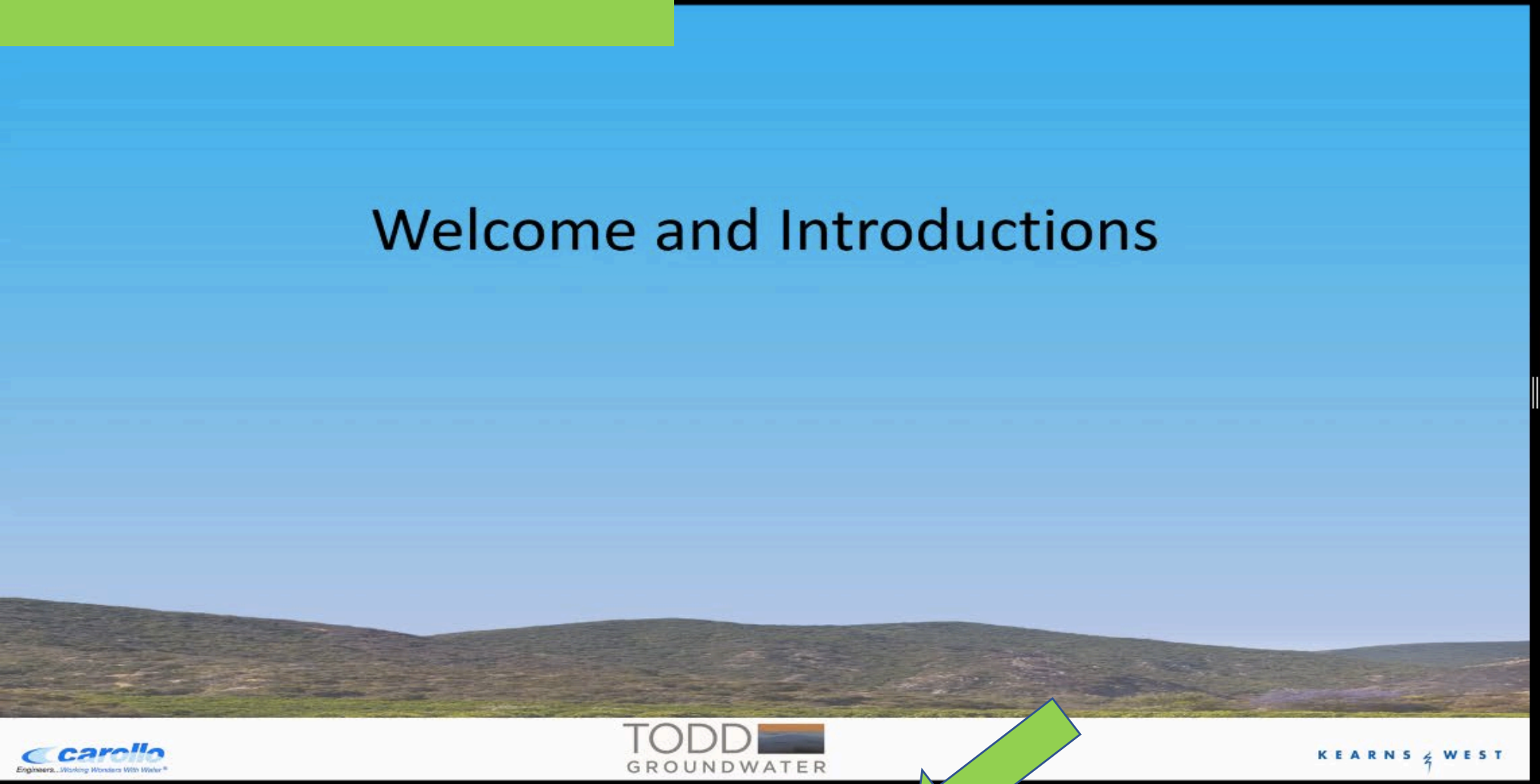
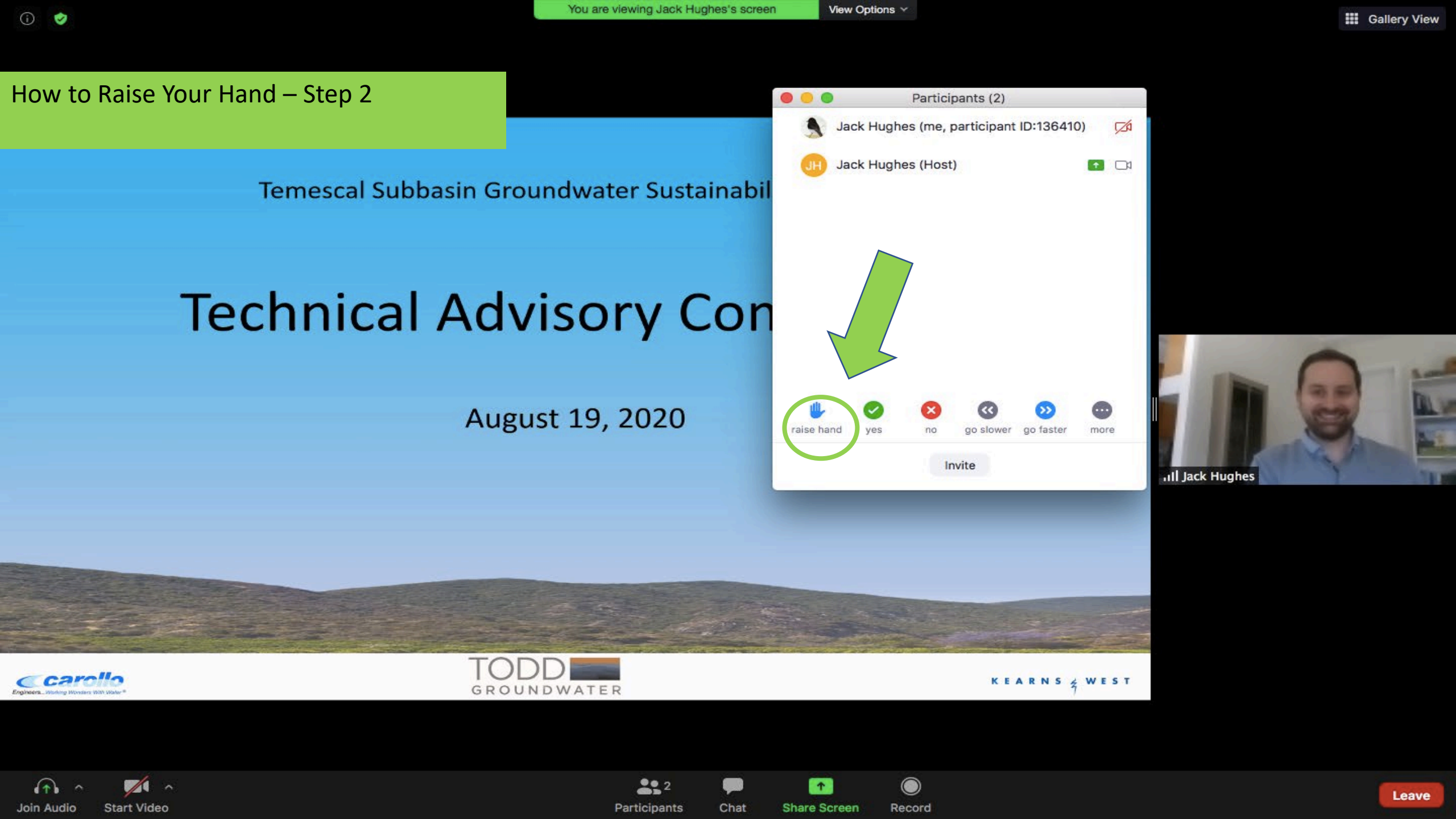
How to Raise Your Hand– Step 1

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Technical Advisory Con
August 19, 2020
Participants (2)
Jack Hughes (me, participant ID:136410)
Jack Hughes (Host)
raise hand
yes
no
go slower
go faster
more
Invite
Jack Hughes
carollo
TODD GROUNDWATER
KEARNS WEST
Join Audio
Start Video
Participants
2
Chat
Share Screen
Record
Leave

Welcome and Introductions

Introductions

- Name
- Who you are representing
- What have you been pleasantly surprised by recently?

Why the Temescal Groundwater Sustainability Agency Needs You

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Tips for a Productive Discussion

- Let one person speak at a time
- Help make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Overview of Meeting Agenda

Meeting Agenda

1. Welcome and Introductions
2. Overview of Meeting Agenda
3. Orientation to the Sustainable Groundwater Management Act
   - Sustainable Groundwater Management Act (SGMA) Overview
   - Temescal Subbasin GSA
   - Discussion/Q&A
4. Summary of GSP Workplan and Schedule
   - GSP Workplan and Schedule
   - Discussion/Q&A
5. Outreach and Involvement
   - Outreach and Stakeholder Involvement Plan
   - Focus on Disadvantaged Community Engagement
   - Website Overview
   - Fact Sheets
   - Public Workshop 1
   - Discussion/Q&A
6. Role of the Technical Advisory Committee
   - Technical Advisory Committee (TAC) formation and purpose
   - Draft TAC Protocols and Operating Principles and Confirmation
   - Discussion of TAC roles and responsibilities
7. Public Comment
8. Next Steps and Final Comments

Orientation to the Sustainable Groundwater Management Act

Sustainable Groundwater Management Act (SGMA)

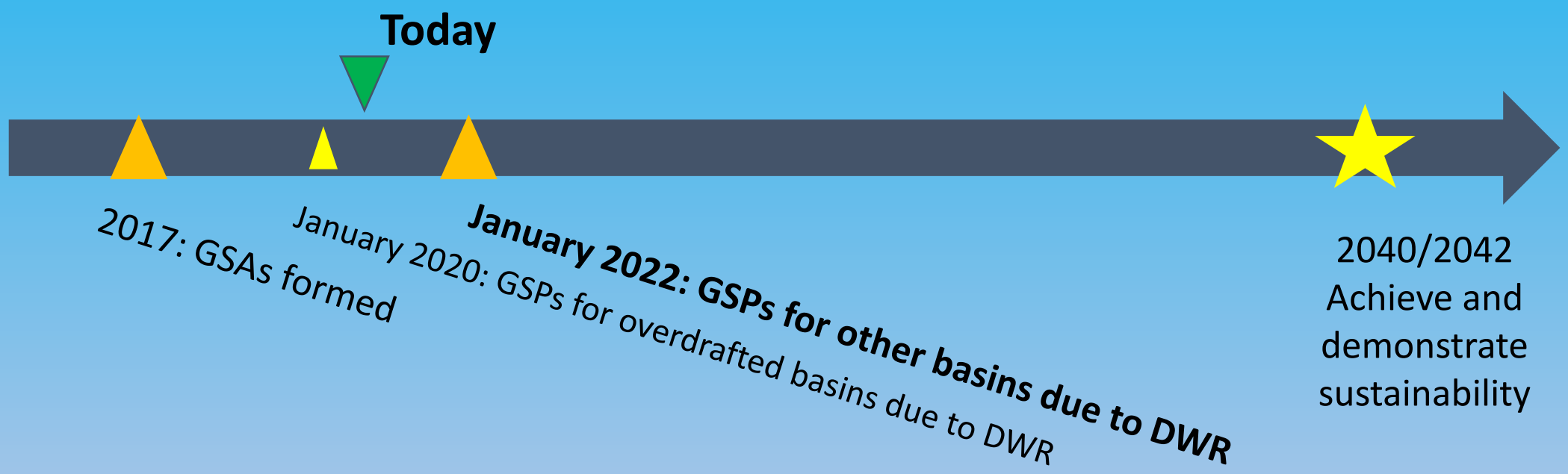
Landmark legislation signed into law in 2014

- Provides framework for sustainable groundwater management
- Purpose is to facilitate local management of groundwater
- State assistance, and intervention if necessary

Includes comprehensive requirements for:

- Forming groundwater sustainability agencies (GSA)
- Preparing groundwater sustainability plans (GSP)
- Meeting deadlines

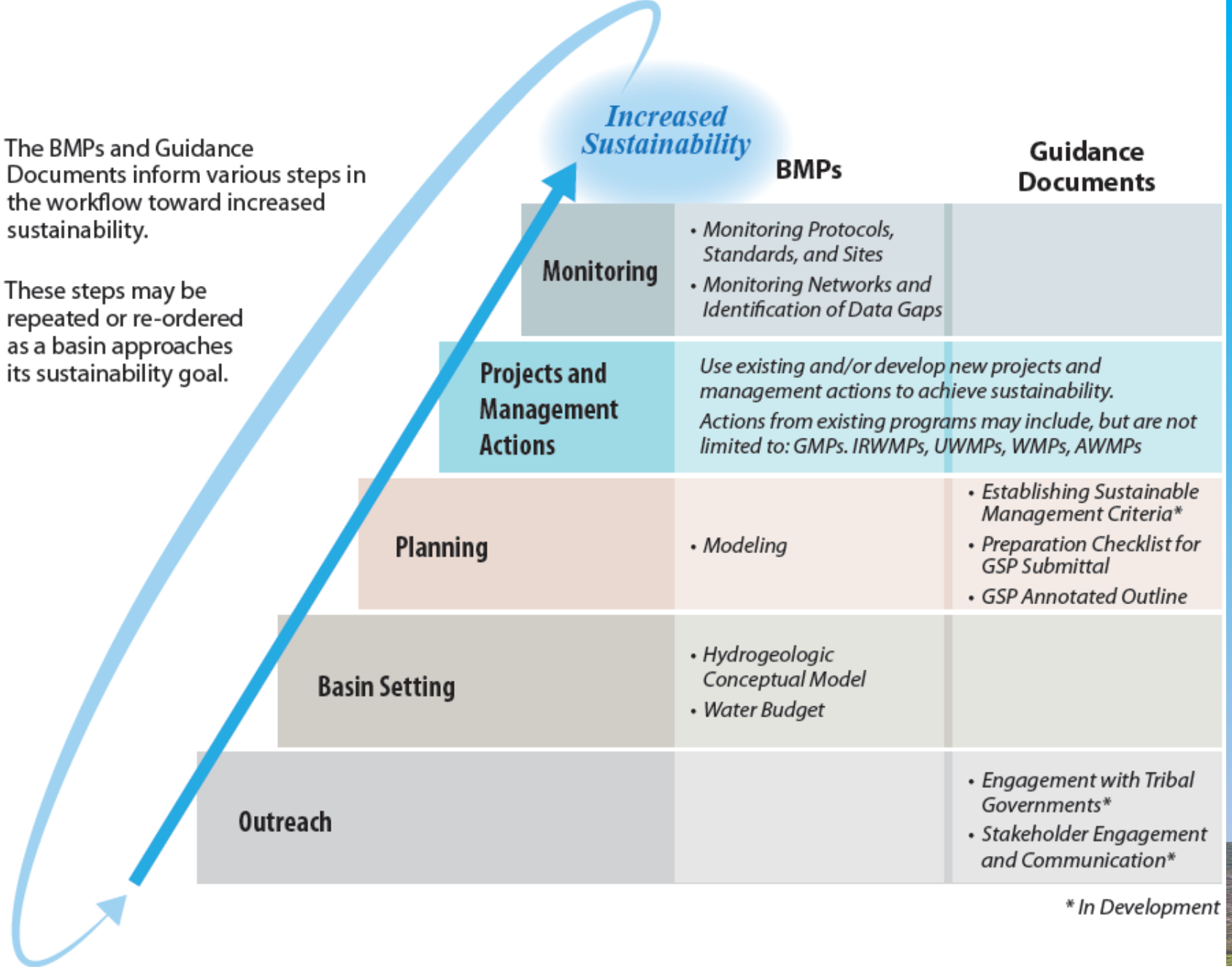
SGMA has a required timeline



Achieving sustainable groundwater management

The BMPs and Guidance Documents inform various steps in the workflow toward increased sustainability.

These steps may be repeated or re-ordered as a basin approaches its sustainability goal.



* In Development

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TODD GROUNDWATER

KEARNS WEST

What is Sustainable Groundwater Management?

- The management and use of groundwater in a manner that can be maintained without causing undesirable results
- Evaluated with respect to specific Sustainability Indicators
- Locally defined

Sustainability Indicators

Chronic lowering of groundwater levels

Reduction of groundwater storage

Degradation of water quality

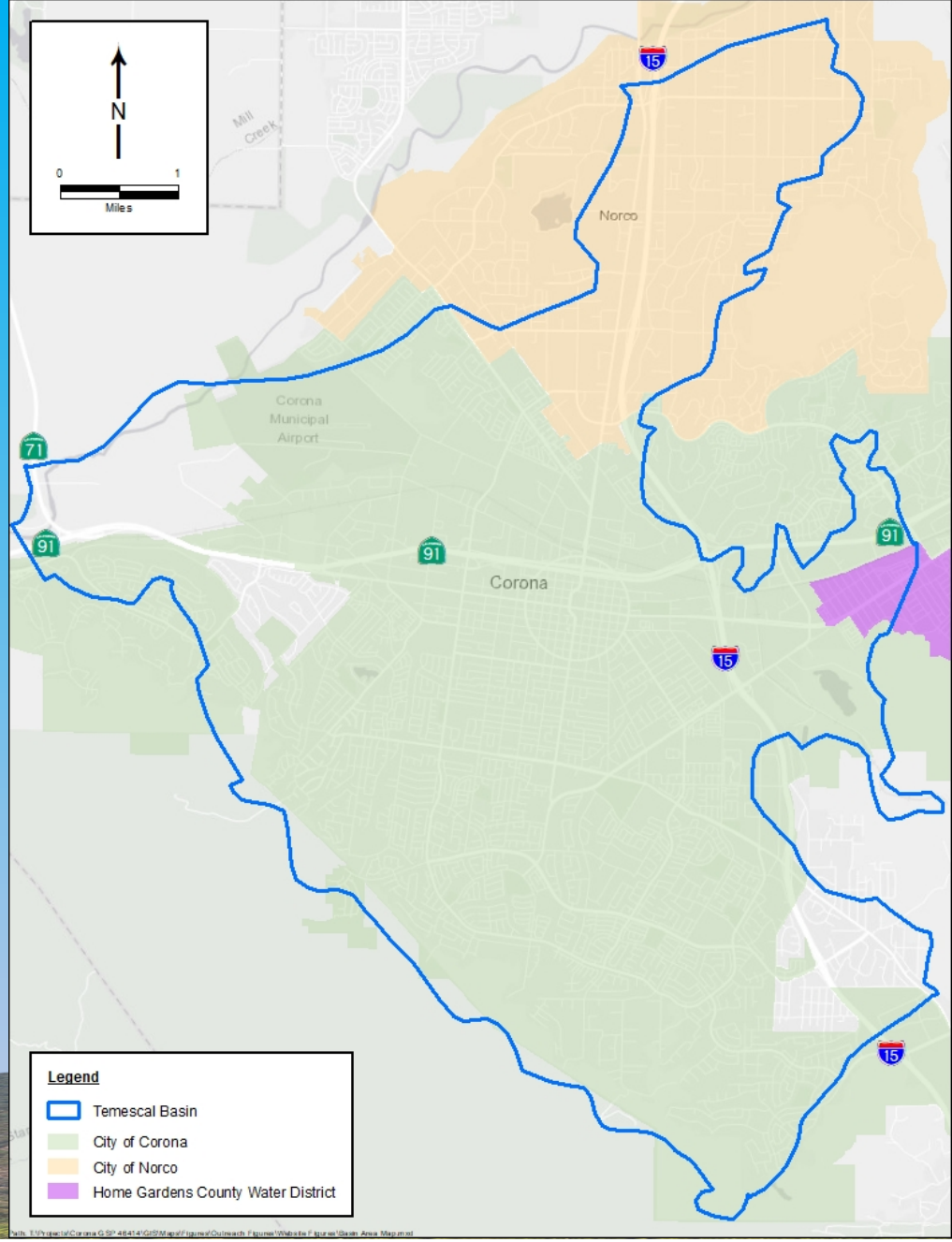
Depletions of interconnected surface water affecting beneficial uses

Land subsidence affecting land uses

Seawater intrusion (not applicable here)

The Temescal Basin

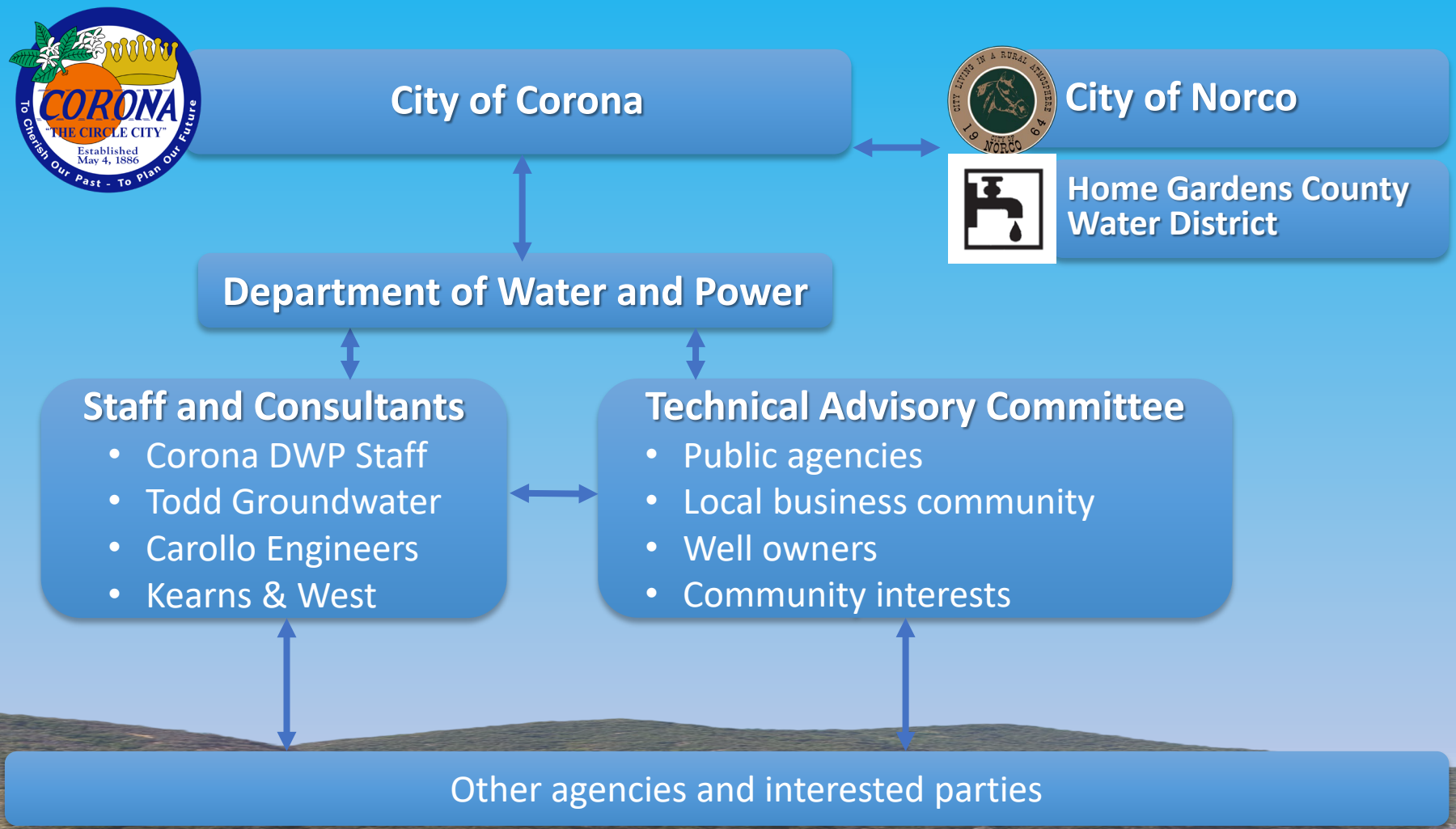
- DWR categorized as a Medium Priority Basin
- Contiguous and connected



Groundwater Sustainability Agency for the Temescal Basin

- Managed together historically
- Corona, Norco, and Home Gardens County Water District formed GSA led by Corona
- Allows for preparation of one, unified GSP

GSA Organization



To Date, the Groundwater Sustainability Agency

- Awarded grant for GSP preparation
- Assembled GSP team
- Initiated technical work on GSP
- Created outreach plan
- Formed TAC
- Creating new SGMA section on DWP website

GRANT AGREEMENT BETWEEN THE STATE OF CALIFORNIA
(DEPARTMENT OF WATER RESOURCES) AND
CITY OF CORONA
AGREEMENT NUMBER 4600012652
2017 PROPOSITION 1 SUSTAINABLE GROUNDWATER PLANNING (SGWP) GRANT

THIS GRANT AGREEMENT is entered into by and between the Department of Water Resources of the State of California, herein referred to as the "State" or "DWR" and the City of Corona, a public agency in the State of California, duly organized, existing, and acting pursuant to the laws thereof, herein referred to as the "Grantee," which parties do hereby agree as follows:

1) PURPOSE. The State shall provide funding from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) to assist the Grantee in financing the planning and/or selected project activities (Project) that will improve sustainable groundwater management, pursuant to Water Code Section 79700 et seq. The provision of State funds pursuant to this Agreement shall not be construed or interpreted to mean that the Groundwater Sustainability Plan (GSP), or any components of the GSP, implemented in accordance with the Work Plan as set forth in Exhibit A, will be: adopted by the applicable Groundwater Sustainability Agency (GSA); obtain the necessary desirable results of Sustainable Management Criteria; or, meet all of the evaluation and assessment criteria when submitted to the Department of Water Resources as required by the Sustainable Groundwater Management Act and implementing regulations.
2) TERM OF GRANT AGREEMENT. The term of this Grant Agreement begins on the date this Grant Agreement is executed by the State, through final payment plus three (3) years unless otherwise terminated or amended as provided in this Grant Agreement. However, all work shall be completed in accordance with the Schedule as set forth in Exhibit C.
3) GRANT AMOUNT. The maximum amount payable by the State under this Grant Agreement shall not exceed $732,338.
4) GRANTEE COST SHARE. The Grantee is required to provide a Local Cost Share (non-State funds) of not less than 50 percent of the Total Project Cost. The cost share requirement for projects benefiting a Severely Disadvantaged Community (SDAC), Disadvantaged Community (DAC), or an Economically Distressed Areas (EDA) may be waived or reduced. The Grantee agrees to provide a Local Cost Share (non-State funds) for the amount as documented in Exhibit B (Budget). Local Cost Share may include Eligible Project Costs directly related to Exhibit A incurred after January 1, 2015.
5) BASIC CONDITIONS. The State shall have no obligation to disburse money for a project under this Grant Agreement until the Grantee has satisfied the following conditions (if applicable):
    1. Prior to execution of this Grant Agreement, selected applicants (Groundwater Sustainability Agency) for GSP Development projects must submit evidence of a notification to the public and DWR prior to initiating development of a GSP in compliance with California Code of Regulations, title 23, Section 350 et seq. (GSP Regulations) and Water Code Section 10727.8.
    2. The Grantee must demonstrate compliance with all relevant eligibility criteria as set forth on pages 7 and 8 of the 2015 Grant Program Guidelines for the SGWP Grant Program.
    3. For the term of this Grant Agreement, the Grantee submits timely reports and all other deliverables as required by Paragraph 16, "Submission of Reports" and Exhibit A.
6) DISBURSEMENT OF FUNDS. The State will disburse to the Grantee the amount approved, subject to the availability of funds through normal State processes. Notwithstanding any other provision of this Grant Agreement, no disbursement shall be required at any time or in any manner which is in violation of, or in conflict with, federal or state laws, rules, or regulations, or which may require any rebates to the federal government, or any loss of tax-free status on state bonds, pursuant to any federal statute or regulation. Any and all money disbursed to the Grantee under this Grant Agreement shall be deposited in a non-interest bearing account and shall be used solely to pay Eligible Project Costs.

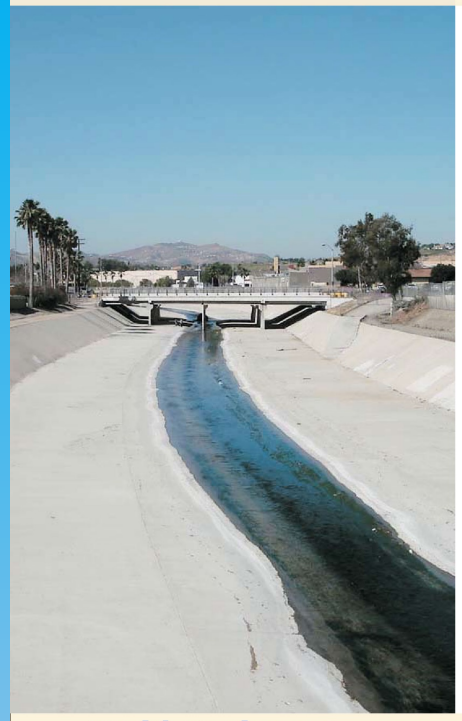
Discussion / Q&A

- What have you heard about groundwater and/or SGMA and what do you think are some important groundwater management issues?
- Are you aware of any data or studies we should review during GSP preparation?

Summary of GSP Workplan and Schedule

The GSP will Build on Existing Management

- Local groundwater
- Imported water
- Water recycling and water conservation
- Monitoring
- Collaboration with other local agencies
- Transition to SGMA requirements



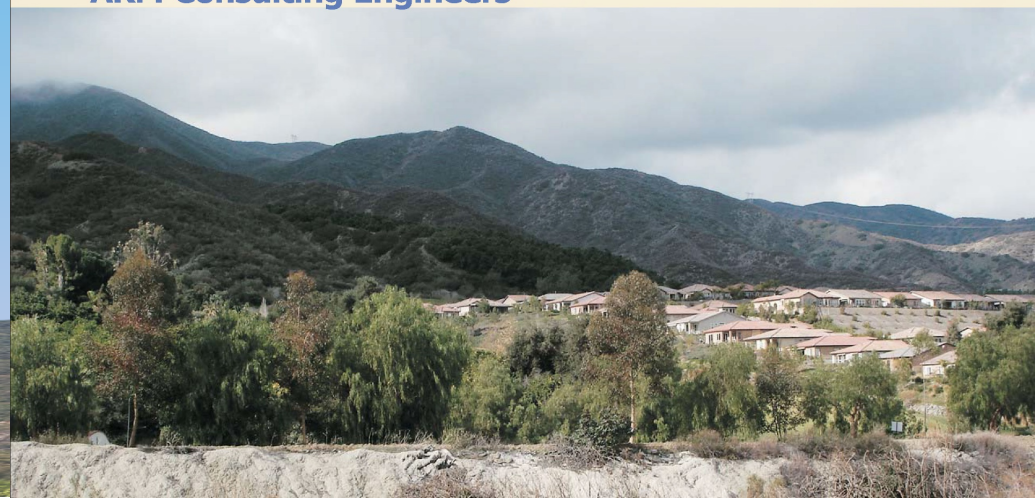
AB3030

Groundwater Management Plan

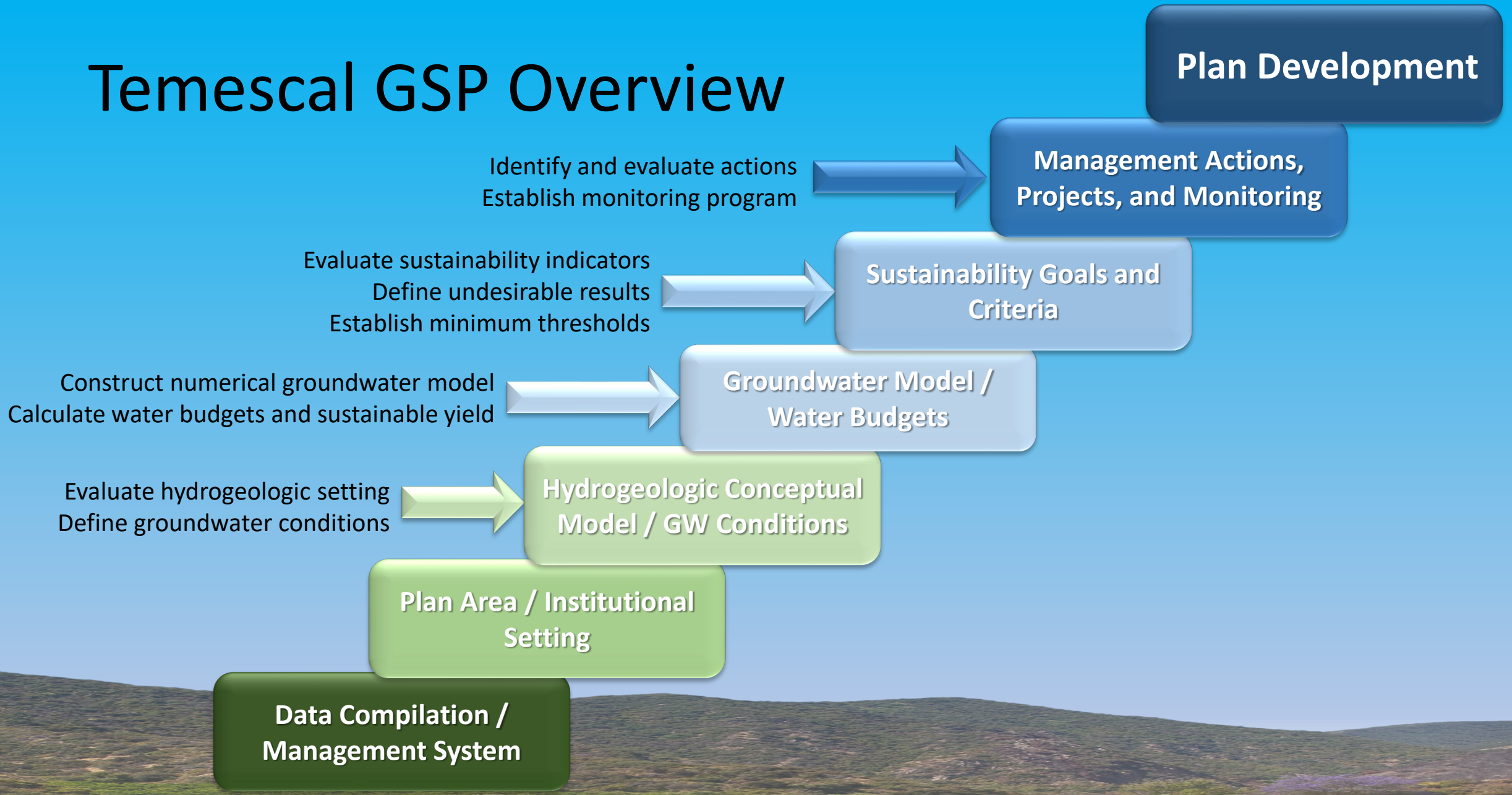
Prepared for
City of Corona

June 2008

Todd Engineers
AKM Consulting Engineers



Temescal GSP Overview



Sustainability Indicator Requirements

- Groundwater elevation decline based on historical trends, water year type, and projected water use in the basin

- Sustainable yield, calculated based on historical trends, water year type, and projected water use in the basin

- Number of supply wells, volume of water, or location of an isocontour exceeding constituents of concern, considering state and federal standards

- Depletion that has adverse impacts on beneficial use of surface water supported by the location, quantity, and timing of depletions; assumes use of a numerical model.

- Rate and extent of subsidence that interferes with surface land use supported by identification of land/property interests affected or likely to be affected.

Considerations for Temescal

- Historic low levels? Consider beneficial uses of wells; problems during the recent drought? **– Must be water levels in representative wells.**

- Use Water Level criteria? Develop operational range of storage with an emergency supply? **– Related to water levels.**

- Title 22, basin plan objectives, GAMA, GeoTracker, SNMP?

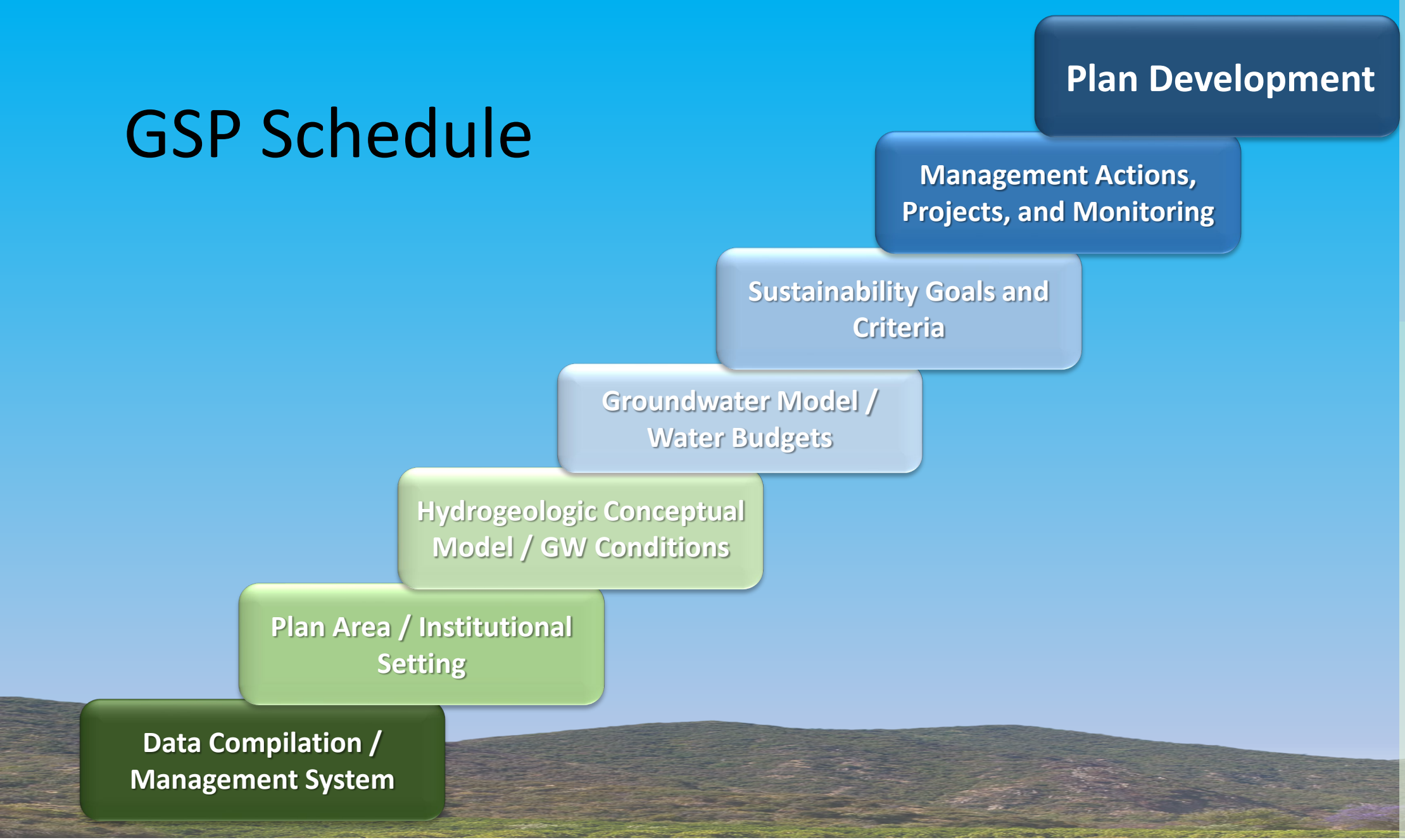
– Should coordinate with existing regional programs.

- Interconnected Surface Water and Groundwater Dependent Ecosystems (GDEs), Prado area? **– Modeling to identify potential undesirable results.**

- Subsidence does not currently interfere with land uses

– Can take advantage of statewide satellite estimates.

GSP Schedule



TAC Meetings and Workshops

TAC Meeting 4 – May 19, 2021

Draft GSP Presentation (Q3 2021)

TAC Meeting 3 – February 17, 2021

Public Workshop 3 Management Actions (Q2 2021)

Public Workshop 2 Sustainability Criteria (Q1 2021)

TAC Meeting 2 – November 18, 2020

Public Workshop 1 Kickoff and Introduction to SGMA (Q3 2020)

TAC Meeting 1 – August 19, 2020

GSP Workplan and Schedule Discussion/Q&A

Questions?

Comments?

Outreach and Stakeholder Involvement

Outreach and Stakeholder Involvement Plan Purpose

- Provide a framework for integrating public and stakeholder outreach and involvement into GSP preparation.
- Meet SGMA requirements
  - GSAs must consider the interests of all beneficial uses and users of groundwater and provide opportunities for public engagement and active involvement of diverse social, cultural, and economic elements of the population.

Outreach and Stakeholder Involvement Plan Objectives

- ***Inform*** all stakeholders of the GSP development process, including purpose, opportunities and issues, core recommendations, and timeline.
- Provide ***meaningful opportunities*** for stakeholders and the public to learn, ask questions, and provide input.
- Involve the many ***diverse communities and stakeholders*** of Corona, Norco, and Home Gardens, recognizing that different approaches may be needed to reach specific populations like Disadvantaged Communities, and flexibility and adaptation in approach may be required.
- Ensure a ***transparent process*** where stakeholders and the public can understand what important discussions are taking place, how they can participate in them, and how input is being used.

Outreach and Stakeholder Involvement Plan

Stakeholder Categories

- Agriculture
- California Statewide Groundwater Elevation Monitoring Agencies
- Businesses and Development
- Disadvantaged Communities
- Domestic Well Owners
- Environmental and Conservation
- Extractive Industry
- Federal Government Agencies
- Groundwater Right Holders
- Industrial Well Operators
- Land Use Planning Agencies
- Local Water Districts
- Municipal Well Operators
- Private Water Users
- Regulatory Agencies
- Surface Water Users

Outreach and Stakeholder Involvement Plan

Temescal Subbasin GSP Outreach and Stakeholder Involvement Process

	Step 1 **Launch Project** Summer 2020	Step 2 **Conduct Baseline Studies** Summer and Fall 2020	Step 3 **Build Water Budget and Numerical Model** Fall and Winter 2020	Step 4 **Define Sustainability Goal and Criteria** Winter 2021	Step 5 **Prepare Draft GSP** Spring 2021	Step 6 **Review Draft GSP and Adopt Final GSP** Summer – Winter 2021
Stakeholder and Public Dialogue Focus	Announce project launch.	Provide info on project purpose and methodology, and role of stakeholder involvement.	Share information regarding Step 2 activities and gather feedback on water budget and modeling, and sustainability criteria.	Review draft sustainability criteria and gather feedback on management actions.	Gather feedback on draft management actions and inform about implementation and monitoring.	Comments on Draft GSP Final GSP Submittal to DWR

Outreach and Stakeholder Involvement Plan Activities

- Pre-Workshop Outreach
- Public Workshops
- Technical Advisory Committee Meetings
- City Council and Board of Directors Meeting Presentations
- Public Comment Period

Temescal Subbasin GSP Outreach and Stakeholder Involvement Process

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Stakeholder and Public Involvement	Community Leader/ Organization Interviews Stakeholder Identification Outreach and Stakeholder Involvement Communications Plan	TAC Meeting #1 Updates at City Council/Board Meetings Pre-Workshop Outreach Round 1 Public Workshop #1 Kickoff Meeting	TAC Meeting #2 Updates at City Council/Board Meetings	TAC Meeting #3 Updates at City Council/Board Meetings Pre-Workshop Outreach Round 2 Public Workshop #2	TAC Meeting #4 Updates at City Council/Board Meetings Pre-Workshop Outreach Round 3 Public Workshop #3	Pre-Workshop Outreach Round Public Workshop #4 Public notice of process and availability of review draft. 90 Day Comment Period & Adoption

City Website Page and Social Media

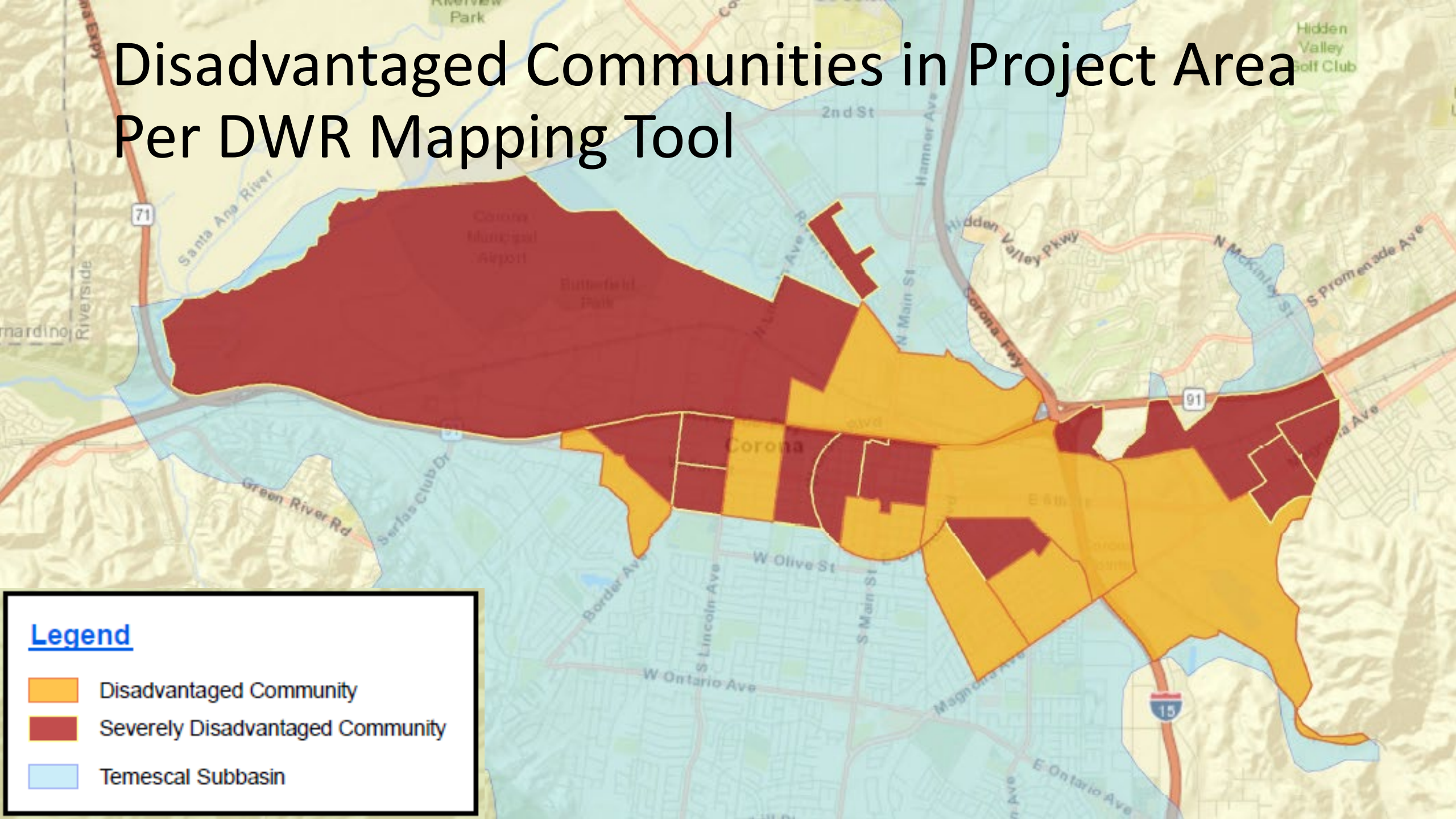
Focus on Underrepresented Community Engagement

Underrepresented Community Engagement Definition

Underrepresented Communities are:

- Disadvantaged Communities characterized by an annual median household income less than 80% of the California statewide median household income.
- Severely Disadvantaged Communities are characterized by an annual median household income less than 60% of the California statewide median household income.

Disadvantaged Communities in Project Area Per DWR Mapping Tool



Temescal Subbasin GSP Outreach and Stakeholder Involvement Process

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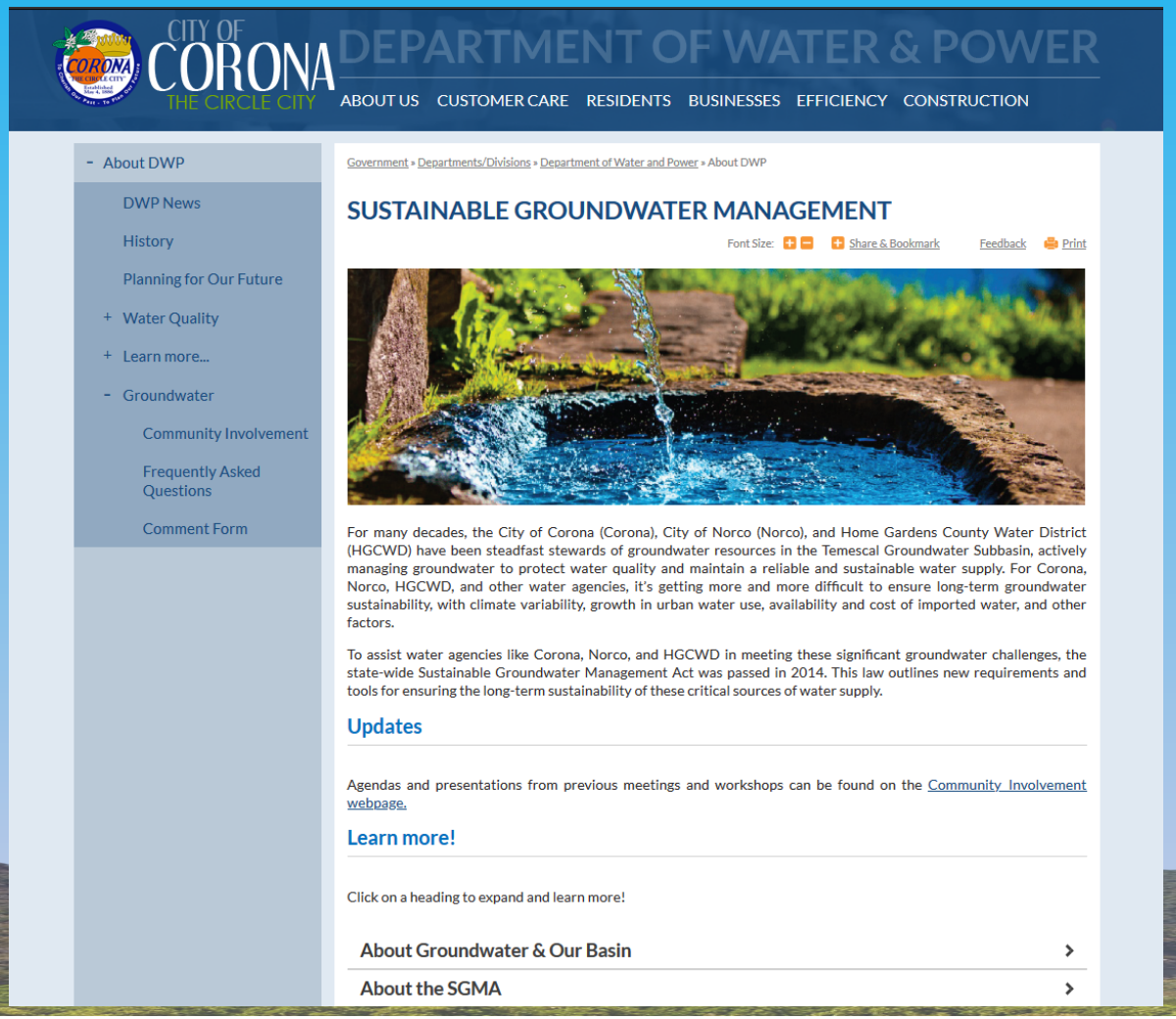
Website


CITY OF CORONA
THE CIRCLE CITY
DEPARTMENT OF WATER & POWER
ABOUT US
CUSTOMER CARE
RESIDENTS
BUSINESSES
EFFICIENCY
CONSTRUCTION
- About DWP
DWP News
History
Planning for Our Future
+ Water Quality
+ Learn more...
- Groundwater
Community Involvement
Frequently Asked Questions
Comment Form
Government » Departments/Divisions » Department of Water and Power » About DWP
SUSTAINABLE GROUNDWATER MANAGEMENT
Font Size:
Share & Bookmark
Feedback
Print
For many decades, the City of Corona (Corona), City of Norco (Norco), and Home Gardens County Water District (HGCWD) have been steadfast stewards of groundwater resources in the Temescal Groundwater Subbasin, actively managing groundwater to protect water quality and maintain a reliable and sustainable water supply. For Corona, Norco, HGCWD, and other water agencies, it's getting more and more difficult to ensure long-term groundwater sustainability, with climate variability, growth in urban water use, availability and cost of imported water, and other factors.
To assist water agencies like Corona, Norco, and HGCWD in meeting these significant groundwater challenges, the state-wide Sustainable Groundwater Management Act was passed in 2014. This law outlines new requirements and tools for ensuring the long-term sustainability of these critical sources of water supply.
Updates
Agendas and presentations from previous meetings and workshops can be found on the Community Involvement webpage.
Learn more!
Click on a heading to expand and learn more!
About Groundwater & Our Basin
About the SGMA

Fact Sheet

TEMESCAL GSA

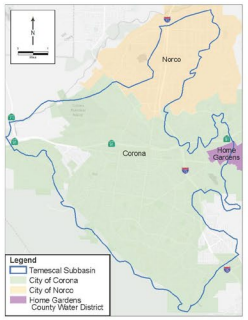
GROUNDWATER FOR PEOPLE, THE ENVIRONMENT, AND THE FUTURE

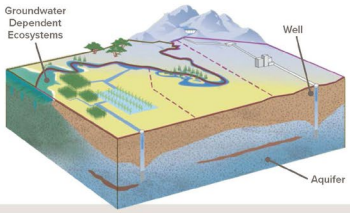
GET INVOLVED! Community input is needed! We want your help to create an effective plan for the future of our groundwater. Visit **CoronaCA.gov/Groundwater** or send an email to **Groundwater@CoronaCA.gov** to attend a workshop or learn more!

THE WATER BENEATH YOUR FEET AND IN YOUR FAUCET

You may not know it, but if you live in Corona, Norco, or Home Gardens, you are likely using groundwater that comes from the **Temescal Basin**. Groundwater from the Temescal Basin and other local groundwater basins, along with water purchased from other areas, is treated and blended together. It then arrives as tap water at your home or business.

The groundwater beneath your feet is an important local resource that will be even more important in the future. On the other side of this factsheet, you can learn more about who manages groundwater in the Temescal Basin and how you can get involved in protecting local groundwater for your community and all who depend on it.





WHAT IS GROUNDWATER?

Groundwater is an important source of water stored in the earth beneath our feet, in spaces between sand, soils, and fractured rock known as an **aquifer**. The areas of the most productive aquifers in California have been defined as **groundwater basins**, which can extend for many miles. The Temescal Basin covers nearly 66 square miles.

WHO USES GROUNDWATER?

Groundwater from aquifers is drawn out by pumps. Cities and water districts pump groundwater from **wells** to supply to businesses and homes. People in rural areas may have their own wells for personal use and/or to water crops. Groundwater also has many uses in manufacturing and industry. It can be used to process, wash, cool, or transport a product.

Groundwater is important to the environment, it flows to and from wetlands, springs, creeks, lakes, and other bodies of water. The plants and animals that live near or in these bodies of water sometimes depend on it for their survival. These areas are called **Groundwater Dependent Ecosystems**.

TEMESCAL GSA

GROUNDWATER FOR PEOPLE, THE ENVIRONMENT, AND THE FUTURE

GROUNDWATER MANAGEMENT

For many decades, the City of Corona, City of Norco, and Home Gardens County Water District have carefully managed groundwater in the Temescal Basin. They have made sure that there is enough clean and drinkable water for the communities that need it. This has become more of a challenge due to changes in climate, the cost of importing water, and the fact that more water is needed because communities are growing. To help all stewards of groundwater plan for these changes, the state-wide **Sustainable Groundwater Management Act** was passed in 2014.

The Sustainable Groundwater Management Act or "SGMA" is a California law that gives local agencies new tools for managing groundwater and planning for the future. The City of Corona, City of Norco, and Home Gardens County Water District have formed the Temescal Subbasin Groundwater Sustainability Agency (Temescal GSA) in order to make a **Groundwater Sustainability Plan** for the Temescal Basin. Since groundwater is such an important resource for everyone, we need your help!

GROUNDWATER FOR THE FUTURE

Important factors for groundwater basin management can be seen on the right. By creating a Groundwater Sustainability Plan, we will better manage the groundwater in the Temescal Basin and ensure we have enough for current and future generations. We will seek understanding of past groundwater use and plan for the sustainable use of future groundwater. Whether you own your own well, use water from the tap, irrigate your crops, or pump groundwater for your business, **everyone can participate in making this plan a success!** We want to hear your questions, ideas, and concerns about protecting our groundwater supply and quality in the Temescal Basin. To find out how, please visit the website at CoronaCA.gov/Groundwater.

To learn more about the TEMESCAL GROUNDWATER SUSTAINABILITY PLAN, including dates of public workshops and other ways to get involved:

- Please visit **CoronaCA.gov/Groundwater**
- Send an email to **Groundwater@CoronaCA.gov**

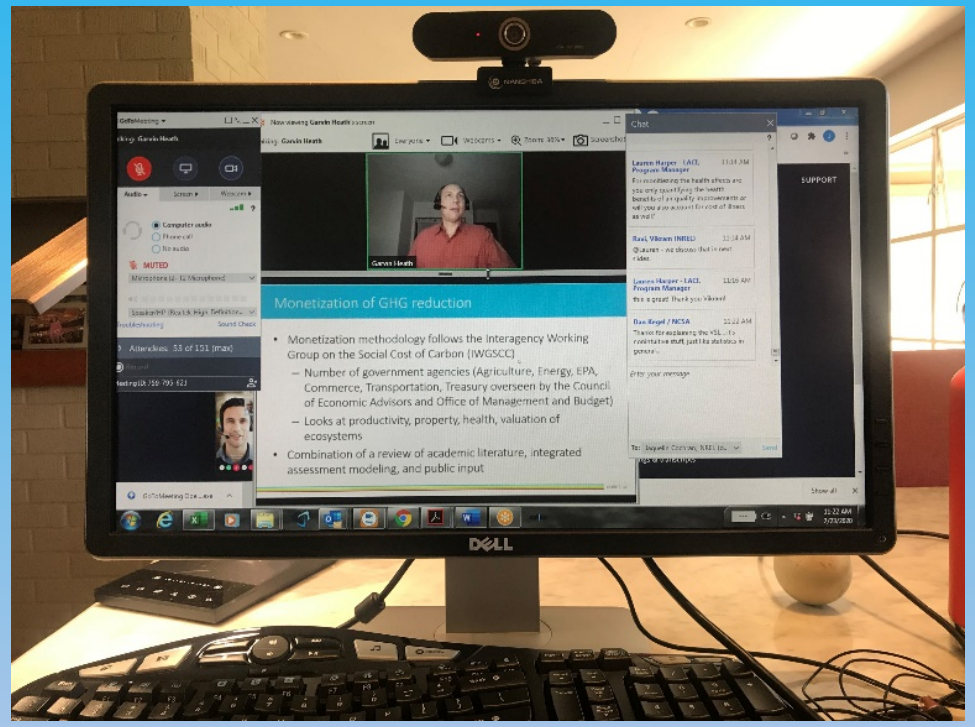
Home Gardens County Water District 3602 N. Grant St., Corona, Calif. 92879 (951) 737-4741

TEMESCAL GROUNDWATER SUSTAINABILITY PLAN

Public Workshop 1

- The first Public Workshop is tentatively scheduled for September 29th
- Focus
  - Introduction to SGMA and GSPs, the Temescal Basin, planning process, and resources

Public Workshop 1 . . . Virtual + Inclusive



Creative and innovative tools will be employed to accomplish workshop objectives

Discussion / Q&A

- How can we reach more of your community or constituents/other stakeholders and the public in our pre-workshop outreach?
- How might you be able to help us spread awareness of the first public meeting?

Role of the Technical Advisory Committee

TAC Protocols and Operating Principles

- Introduction
- Charge
- Roles and Responsibilities
- Participation and Collaboration Principles
- Membership
- Request for No Use of Alternatives
- Term of Service
- Meeting Logistics and Communication
- Communication and Media
- Open Meetings
- Point of Contact

TAC Protocols and Operating Principles

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Technical Advisory Committee Contact

Melissa Estrada-Maravilla

Email: Melissa.Estrada-Maravilla@CoronaCA.gov

Phone: 951.736.2479

Discussion of TAC Roles and Responsibilities and Confirmation

Questions?

Comments?

Protocols and Operating Principles Confirmation

Public Comment

Next Steps and Final Comments

Next Steps

- Continue Technical Analyses
  - Prepare internal draft Hydrogeologic Conceptual Model and Groundwater Conditions chapters of the GSP
  - Continue numerical model and water budget analysis
- Provide Administrative Draft Plan Area chapter of the GSP to TAC today, with all ***comments back by September 4th***.
- Prepare for and hold Public Workshop 1 (September 29th)
- Next TAC meeting November 18, 2020
  - Update on technical analyses
  - Conceptual sustainability criteria discussion

Thank You!

Technical Advisory Committee Meeting 2

Meeting Summary

Wednesday, November 18, 2020
1:00 p.m. – 3:00 p.m.
Location: Zoom Virtual Meeting

Attendees

Technical Advisory Committee Members

- Ava Moussavi, Riverside County Flood Control and Water Conservation District
- Chad Blais, City of Norco Public Works Department
- Eric Lindberg, California Regional Water Quality Control Board – Santa Ana Region
- Jacque Casillas, Vice Mayor, City of Corona
- Katie Hockett, City of Corona Department of Water and Power
- Timothy Ballon, All American Asphalt
- Tom Moody, City of Corona Department of Water and Power
- Wes Speake, Councilmember, City of Corona

City of Corona Department of Water and Power Staff

- Kristian Alfelor
- Melissa Estrada-Maravilla

Consultant Team

- Chad Taylor, Todd Groundwater
- Maureen Reilly, Todd Groundwater
- Alyson Scurlock, Kearns & West
- Jack Hughes, Kearns & West
- Joan Isaacson, Kearns & West

Summary

1. Welcome and Introductions

Joan Isaacson, meeting facilitator from Kearns & West, welcomed all to the second Technical Advisory Committee (TAC) meeting for the Temescal Basin Groundwater Sustainability Plan (Temescal GSP). The meeting took place online, via ZOOM, hosted by the Temescal Basin Groundwater Sustainability Agency (Temescal GSA). Isaacson led roundtable introductions for TAC members and the consultants assisting the Temescal GSA with meeting facilitation and preparation of the Temescal GSP.

2. Overview of Meeting Agenda

Isaacson reviewed the meeting agenda (see Appendix A). The focus of the meeting was on providing an overview of Public Workshop 1, reviewing Draft Temescal GSP chapters, and then reviewing and

getting input from the TAC on beneficial uses, the Draft Temescal GSP Sustainability Goal, and Conceptual Sustainability Criteria.

3. Public Workshop 1

Jack Hughes, Kearns & West, recapped the attendance and engagement from the first public workshop on September 29, 2020 held from 4:00 to 5:30 p.m. The workshop was held virtually via the Zoom platform, individuals also had the option to view and participate from the City of Corona Council Chambers. The workshop was streamed on the City of Corona's website, Facebook, and YouTube channels and on Corona TV, viewable on Channel 29 on Time Warner Spectrum and Channel 99 on AT&T. There were 13 participants on Zoom representing water districts, non-profits, and residents of the City of Norco and Riverside County. There were 452 Facebook engagements, which includes comments, likes, clicks, and shares, and 23 YouTube views as of November 6, 2020.

Hughes then described the input and feedback that was heard during and after the first public workshop. Participants asked questions about water quality early in the workshop when the project team was discussing water supply and groundwater basics. Later comments focused on coordination with stakeholders in neighboring basins when the project team was discussing the Temescal Basin and GSP development. Hughes noted that meetings with representatives from each neighboring basin are currently being set up to establish this coordination. Additional feedback was received in two post-workshop feedback forms regarding outreach and involvement. One participant suggested sending out questions or topics for discussion ahead of the workshops and another participant volunteered to make workshop announcements at pertinent Santa Ana Watershed Project Authority meetings. The next public workshop will take place in Spring 2021 and will focus on sustainability criteria. For more information, see Appendix B.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

4. Draft Groundwater Sustainability Plan Chapters

Chad Taylor, Senior Hydrogeologist at Todd Groundwater, presented on the Draft Hydrogeologic Conceptual Model and Groundwater Conditions Chapters that were distributed to TAC members on November 17, 2020. Taylor provided an overview of the Temescal Basin, noting that it is a contiguous and connected basin that is categorized as medium-priority by the Department of Water Resources. The Draft Hydrogeologic Conceptual Model Chapter establishes the physical framework of the basin while the Draft Groundwater Conditions Chapter documents the historical and current status of the basin. Future analyses will include the water budget, which will quantify inflows, outflows, and storage change in the Temescal Basin, and the numerical model, which will evaluate sustainability criteria, monitoring, and project and management actions.

Taylor reviewed highlights of the Draft Hydrogeologic Conceptual Model Chapter. The Temescal Basin is primarily comprised of young unconsolidated deposits and is surrounded by older bedrock on most of the western and eastern boundaries. In addition, faulting affects groundwater in much of the Temescal Basin, especially on the western side. Taylor displayed three cross section orientations that help illustrate subsurface conditions in the Temescal Basin, noting that only one cross section would be the focus in the presentation. Taylor showed Cross Section A to A' and described the aquifers in the Basin. The Channel Aquifer has been identified as the principal aquifer used for groundwater production in the Temescal Basin. There are also two secondary aquifers in the Basin; they have historically been

less productive alluvial and sandstone aquifers. Taylor noted that the most productive wells in the Temescal Basin, measured by hydraulic conductivity, are in the Channel Aquifer. The basin thickness, or depth to the bottom of the basin, varies and is deepest in the southwest portion of the Channel Aquifer.

Taylor next reviewed highlights of the Draft Groundwater Conditions Chapter. Groundwater flows consistently towards the northwestern portion of the Temescal Basin and towards the western portion in the Prado area. The Draft Groundwater Conditions Chapter also includes historical groundwater elevation conditions and trends. Taylor showed an example of a hydrograph and described basin-wide trends seen in wells. The highest water levels in most wells were measured in the early 1980s and the lowest water levels are generally present in periods of dry conditions and increased pumping. Taylor noted that current water levels are near record lows.

For water quality, the primary constituents of concern in the Temescal Basin are total dissolved solids and nitrate. Total dissolved solids were found to be highest in the productive portion of the Temescal Basin and nitrate was also found to be high in some areas, both of which will be considered for future management. The Temescal Basin has areas of interconnected surface water in addition to areas where groundwater dependent ecosystems will need to be addressed. Taylor described subsidence as vertical displacement of ground surface, which has been estimated from satellite measurements and noted that there is no evidence of subsidence in the Temescal Basin. Taylor also noted that monitoring of subsidence will continue to ensure there are no changes in the future. For more information on the Draft Hydrogeologic Conceptual Model and Groundwater Conditions Chapters, see Appendix B.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussions, comments, and questions are summarized below.

- Can you provide more detail on the depth of bedrock estimates, how many wells there are, and what interpolation method was used?
- The water quality map shows wells with differing water quality clustered together. What would drive the difference in water quality in the same aquifer? It would be helpful to state that the wells are at different depths.

5. Input on Beneficial Uses

Taylor presented the preliminary list below of known beneficial uses in the Temescal Basin and asked for TAC members' input on additional beneficial uses to include in the Temescal GSP.

- Municipal water supply
- Industrial water supply
- Rural residential water supply
- Small community water system supply
- Small commercial water supply
- Groundwater dependent ecosystems in Temescal Wash and Prado

Discussion and feedback from TAC members on beneficial uses included these comments:

- Cemetery landscaping uses groundwater.
- Industrial water supply includes mining as wash water is used for operations.

- Mining operations use water for processing and dust control in the area.
- It is important to understand the balance between local and imported resources in municipal water supply.
- Scattered residents have their own wells.
- Dust control for development could be included in municipal water supply and rural residential water supply.
- It would be interesting to find out if there are agricultural users in the Temescal Basin.
- There are recreational water uses where groundwater and surface water interface. One known recreational use is a ski club in the Temescal Canyon Lake.

6. Draft Sustainability Goal and Conceptual Sustainability Criteria

Taylor presented the Draft Sustainability Goal for TAC members' feedback. The goal is tailored to the local meaning of sustainability and is the starting point for defining sustainability in the Temescal GSP. The following Draft Sustainability Goal was presented:

To sustain groundwater resources for the current and future beneficial uses of the Temescal Basin in a manner that is adaptive and responsive to the following objectives:

- Provide a long-term, reliable, and efficient groundwater supply for municipal, industrial, and other uses;
- Provide reliable storage for water supply resilience during droughts and shortages;
- Protect groundwater quality;
- Support beneficial uses of interconnected surface waters; and
- Support integrated and cooperative water resource management.

Taylor explained the sustainability criteria required for evaluation according to the Sustainable Groundwater Management Act. The six sustainability indicators include chronic lowering of groundwater levels, reduction of groundwater storage, degradation of water quality, depletions of interconnected surface water affecting beneficial uses, land subsidence affecting land uses, and seawater intrusion (not applicable in the Temescal Basin). Taylor explained undesirable results, minimum thresholds, and measurable objectives. Undesirable results are significant and unreasonable conditions for any of the six sustainability indicators whereas minimum thresholds are numeric values used to define undesirable results. Measurable objectives are specific, quantifiable goals used to track the performance of sustainable management.

Taylor reviewed the six sustainability indicators and gave examples of undesirable results for each of them. He noted that subsidence, or the lowering of the ground surface due to the collapse of subsurface materials, is not a known issue in the Temescal Basin. Potential for undesirable results include reductions in drainage capacity, impacts on the grade of facilities, subsidence around a wellhead, and non-recoverable loss of storage capacity in the aquifers. The interconnected surface water indicator analyzes the relationship between water levels in a stream and groundwater for stream flow. When groundwater is higher, interconnected surface water flows from the groundwater to the stream.

The next indicator, groundwater storage, is directly connected to water levels, therefore this indicator can use water levels to establish minimum thresholds and measurable objectives to ensure that there is enough water to meet the needs of beneficial uses and users. The groundwater levels indicator will consider what undesirable effects should be avoided in the Temescal Basin, such as impacts to shallow

wells and maintenance of municipal and industrial water supply. Lastly, the water quality indicator will establish a numeric value to define significant and unreasonable degraded water quality throughout the Temescal Basin. Taylor noted that local, state, and federal water quality standards should be considered. See Appendix B for more information on the Draft Sustainability Goal and sustainability criteria.

Discussion/Input

The team asked for feedback on the Draft Sustainability Goal.

- The Draft Sustainability Goal and criteria look good.
- Groundwater recharge should be factored into redevelopment. New development should have landscapes that collect water to help create sustainable water storage. Basins should have their supply refreshed by rain and runoff. This can be accomplished in part by incorporating new parking lot designs and directing runoff differently to a landscaped area that can naturally filter water and allow it to percolate into the ground. There should be a target for quantifying recharge. Some of these stormwater capture elements are included in the City of Corona's General Plan Update.

The team posed the following questions for discussion: 1) Are you aware of undesirable results that have occurred in the past? 2) Are there specific undesirable results you are concerned about?

- Nitrate levels in basin groundwater have been rising recently and total dissolved solid levels might be dropping.
- Trichloropropane (TCP) and Per- and polyfluoroalkyl substances (PFAS) are contaminants of concern that have had undesirable results for the Temescal Basin. TCP and PFAS, along with total dissolved solids and nitrate, could potentially impact groundwater use.
- The more refined analytical technologies become, the more contaminants are found at smaller concentrations. There are contaminants that may exist in the water that are not currently known, and they may create future issues that we are not yet aware of. There should be some acknowledgement that unregulated contaminants today may be regulated in the future. The allowable limit for PFAS has changed drastically since it first started being regulated.
- PFAS and other contaminants are concerning for future groundwater uses. Groundwater will not be a sustainable water source if contaminants make it unusable.
- There has been pressure at the state level for regulating PFAS and it would be proactive to get ahead of the issue.

7. Public Comment

No members of the public provided comment.

8. Next Steps and Wrap Up

Isaacson summarized next steps for the consultant team and TAC members. The consultant team will prepare an internal draft of the Water Budget Chapter and continue conducting the numerical model analysis and developing the sustainability criteria. The consultant team distributed the Draft Hydrogeologic Conceptual Model and Groundwater Conditions Chapters to the TAC on November 17, 2020 and asked members to provide comments by December 4, 2020. Additional next steps are preparing for the upcoming public workshop, which will be held in Spring 2021 and the next TAC meeting on February 17, 2021.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

Appendix A

Meeting Agenda

Temescal GSP

Technical Advisory Committee Meeting 2

November 18, 2020

1:00 – 3:00 p.m.
Zoom Meeting: https://zoom.us/j/97160500385

Agenda

1) Welcome and Introductions

2) Overview of Meeting Agenda

3) Public Workshop 1
   - Attendance and Engagement
   - Input and Feedback
   - Timeline and Focus for Public Workshop 2
   - Discussion/Q&A

4) Draft GSP Chapters
   - Hydrogeologic Conceptual Model
   - Groundwater Conditions
   - Discussion/Q&A

5) Input on Beneficial Uses

6) Draft Sustainability Goal and Conceptual Sustainability Criteria
   - Purpose of Sustainability Goal
   - Draft Goal, Presentation
   - Definition of Undesirable Results, Minimum Thresholds, and Measurable Objectives
   - Discussion of Draft Goal and Conceptual Undesirable Results for Consideration for Sustainability Indicators

7) Public Comment

8) Next Steps and Wrap Up

Appendix B

Presentation Slides

Temescal Groundwater Sustainability Agency

Technical Advisory Committee

November 18, 2020

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Welcome and Introductions

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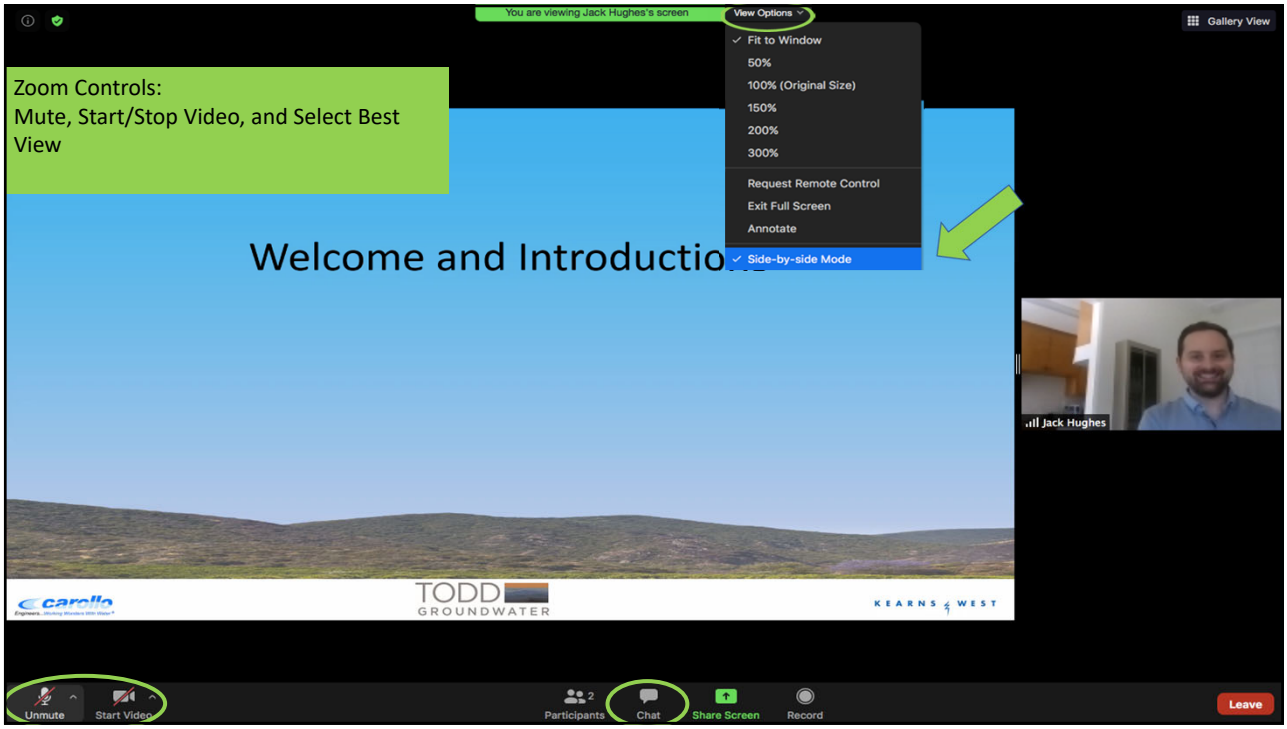

Tips for a Productive Discussion

- Let one person speak at a time
- Help make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Overview of Meeting Agenda

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Meeting Agenda

1. Welcome and Introductions
2. Overview of Meeting Agenda
3. Public Workshop 1
4. Draft GSP Chapters
5. Input on Beneficial Uses
6. Draft Sustainability Goal and Conceptual Sustainability Criteria
7. Public Comment
8. Next Steps and Final Comments

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Public Workshop 1

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Public Workshop 1
Attendance and Engagement

- 13 Participants on Zoom
- 452 Facebook Engagements
- 23 YouTube Views (as of 11/6)

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Public Workshop 1 - Input and Feedback

Questions:

- Why might water taste bad?
- How is water cleaned?
- Why does water taste different in different areas?

Comments:

- Coordination with Chino, Riverside-Arlington, and Orange County Water District important
- Wetland behind Prado Dam has interconnected surface water and groundwater dependent ecosystems

Feedback on outreach and involvement:

- Send out questions or topics for discussion ahead of the workshops
- Make announcements at pertinent Santa Ana Watershed Project Authority task forces
- Good use of background slides, good presenters, and keeping things concise

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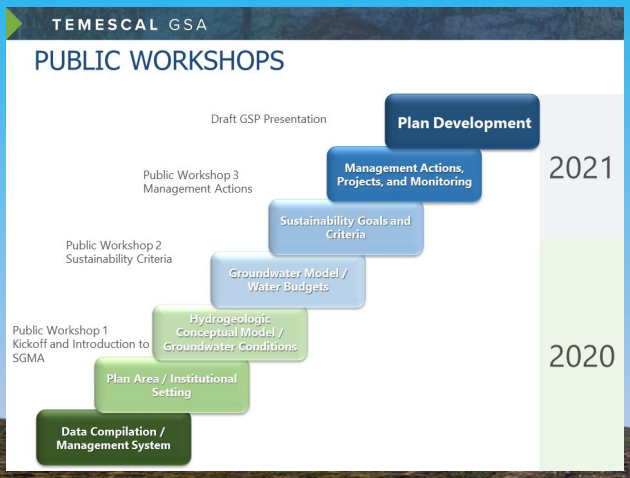
Public Workshop 2



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Discussion / Q&A

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Draft GSP Chapters:
Hydrogeologic Conceptual Model
and
Groundwater Conditions

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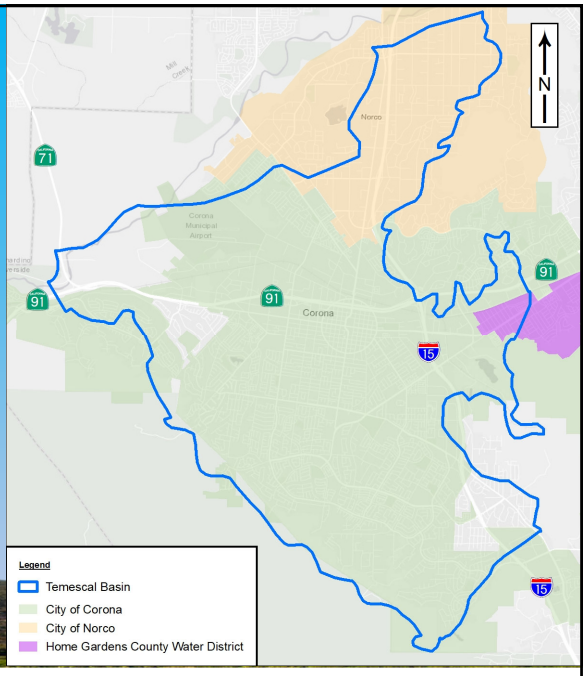
The Temescal Basin

- DWR categorized as a Medium Priority Basin
- Contiguous and connected



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Where are we now in GSP process?

- HCM establishes physical framework of the groundwater basin
- GW Conditions chapter documents historical and current status
- Water Budget will quantify inflows, outflows and storage change
- Numerical Model will support understanding of how the groundwater system works and provide the key analytical tool to evaluate:
  - Sustainability Criteria
  - Monitoring
  - Projects and management actions

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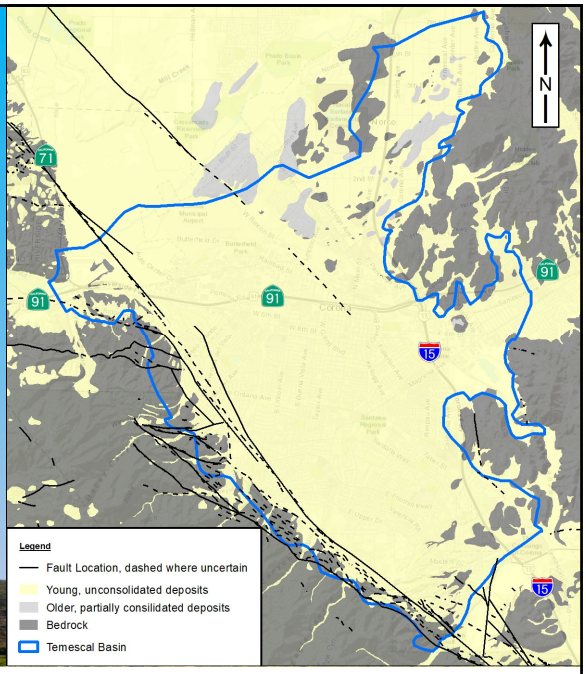
Hydrogeologic Conceptual Model Highlights

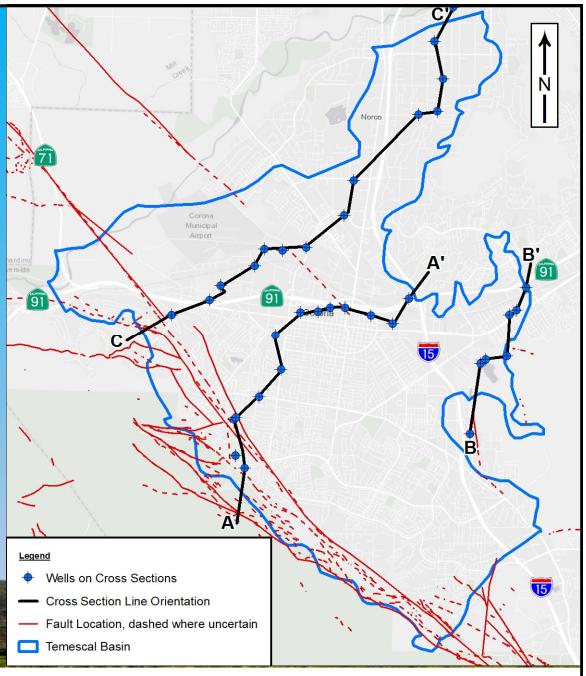
Surficial Geology

- Temescal Basin is primarily young unconsolidated deposits
- Older bedrock surrounds the Basin on the west and much of the east
- Faulting affects groundwater in much of the Basin



Cross Sections

- Three cross sections
- Illustrate subsurface conditions
- Relationship between aquifers in the Temescal Basin



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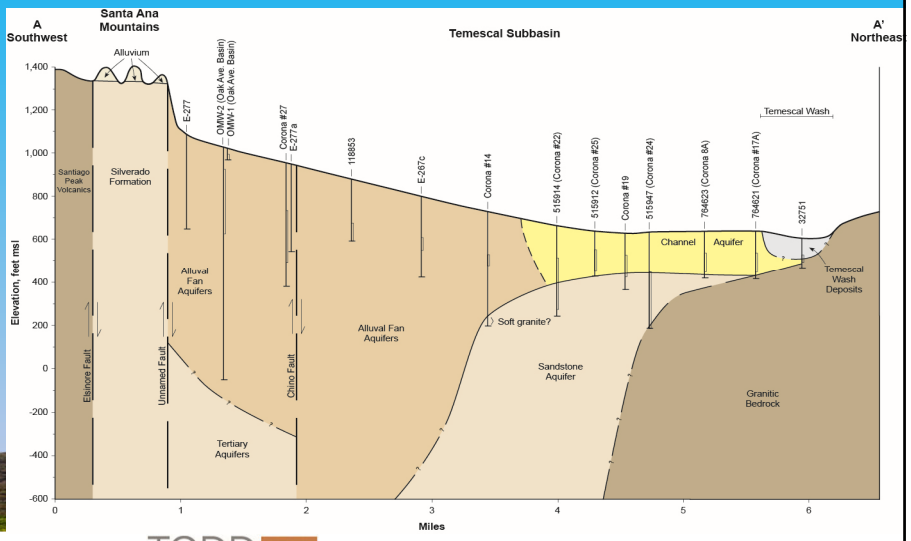
Cross Section A

- Channel Aquifer is the principal aquifer
- Alluvial and Sandstone aquifers secondary



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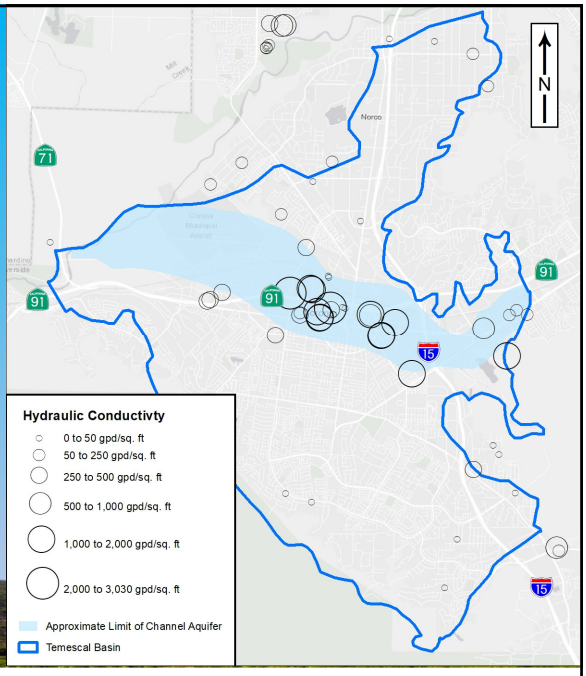
Channel Aquifer

- Channel Aquifer not present everywhere
- The most productive wells (highest hydraulic conductivity) in the Temescal Basin are in the Channel Aquifer



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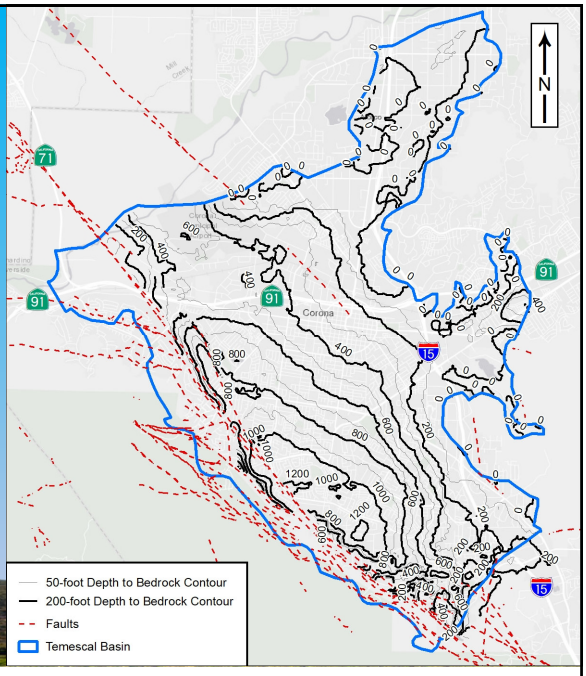
Temescal Basin Thickness

- Deepest in the southwest
- Shallower in the area of the Channel Aquifer
- Deepens near the Arlington Gap



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Groundwater Conditions Highlights

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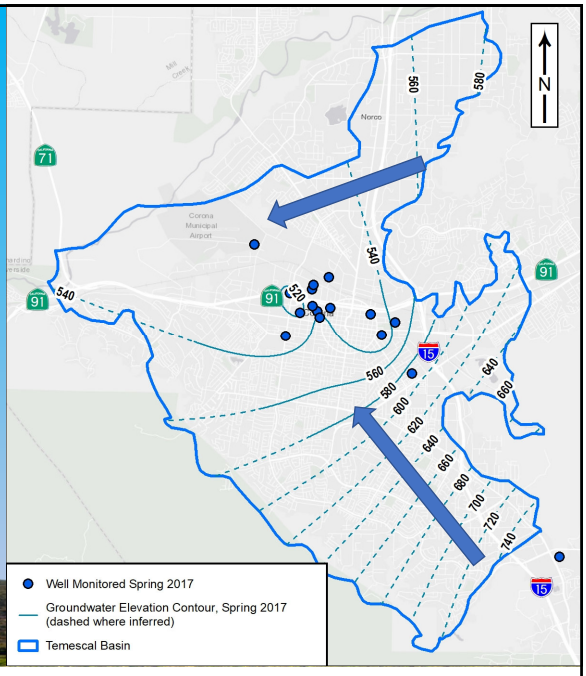
Groundwater Elevation Contours

- Flow in the Temescal Basin is towards the northwest, turning to the west in Prado
- Groundwater flow direction generally consistent



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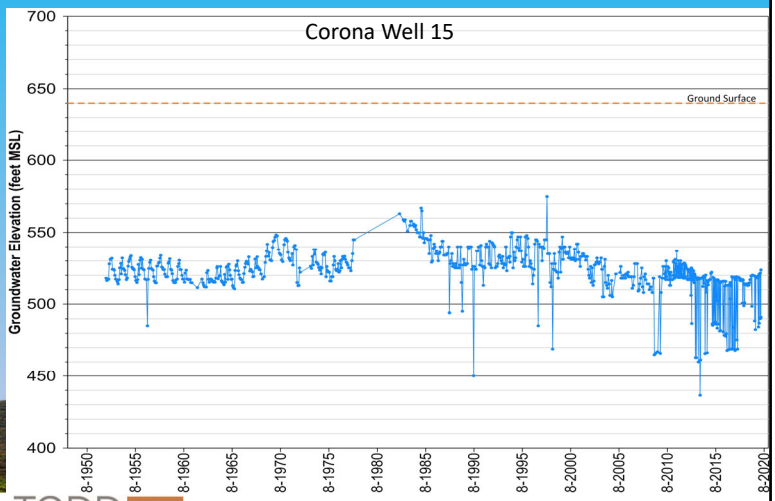
Historical Groundwater Elevations

- Highest water levels in most wells measured in early 1980s
- Lowest levels generally in periods of dry conditions and increased pumping
- Most hydrographs show low water levels during 2000 to 2004, from increased pumping
- Current levels are near record lows



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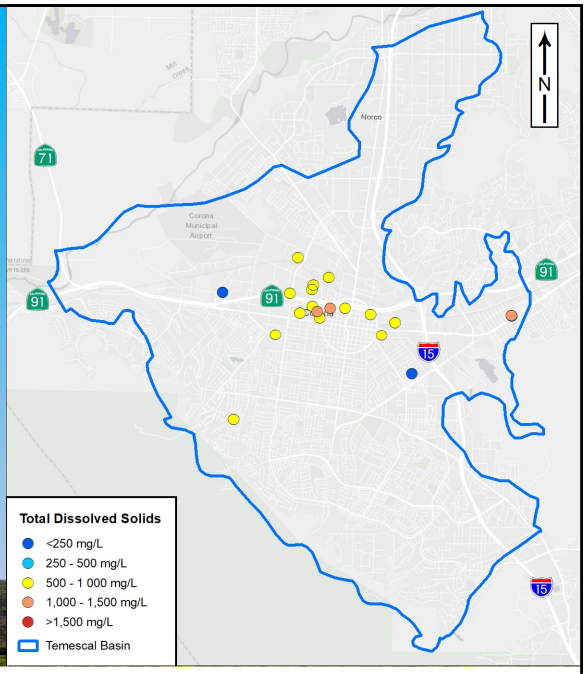
Water Quality

- Available groundwater quality data reviewed
- Primary constituents of concern in the Temescal Basin are total dissolved solids and nitrate
- Total dissolved solids (TDS) elevated in the productive portion of the Basin
- Nitrate also high in some areas



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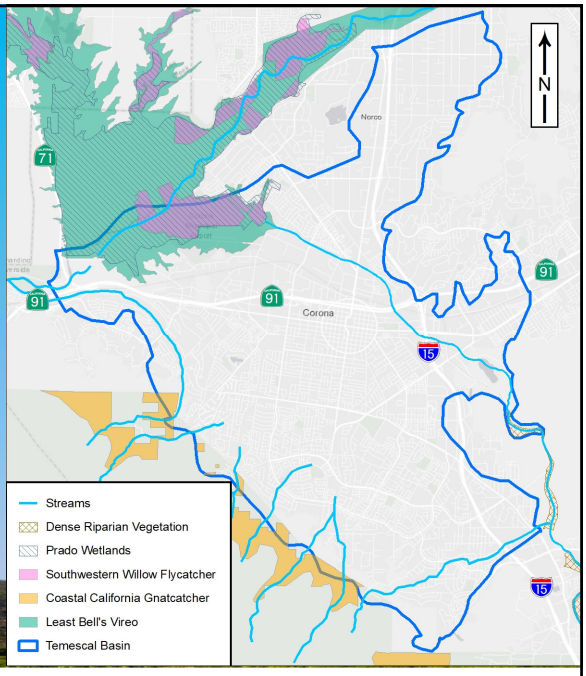
Interconnected Surface Water

- First phase of surface water groundwater evaluation
- Combined review of depth to water, aerial imagery, conceptual model, and mapped features
- There are areas of interconnected surface water in the Basin
- Also areas where there are groundwater dependent ecosystems (GDEs) that will need to be addressed



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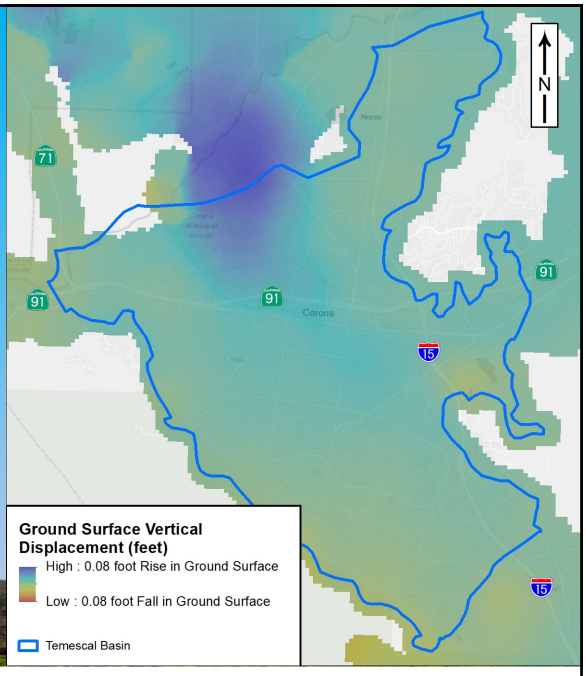
Subsidence

- Basin-wide vertical displacement estimates from satellite measurements
- No evidence of ground surface change in these measurements



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Discussion / Q&A

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Input on Beneficial Uses

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Known Beneficial Uses

- Municipal water supply
- Industrial water supply
- Rural residential water supply
- Small community water system water supply
- Small commercial water supply
- Groundwater dependent ecosystems in Temescal Wash and Prado

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Sustainability Goal and Criteria

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Draft Sustainability Goal

To sustain groundwater resources for the current and future beneficial uses of the Temescal Basin in a manner that is adaptive and responsive to the following objectives:

- Provide a long-term, reliable and efficient groundwater supply for municipal, industrial, and other uses
- Provide reliable storage for water supply resilience during droughts and shortages
- Protect groundwater quality
- Support beneficial uses of interconnected surface waters, and
- Support integrated and cooperative water resource management.

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Sustainability Indicators

- Chronic lowering of groundwater levels
- Reduction of groundwater storage
- Degradation of water quality
- Depletions of interconnected surface water affecting beneficial uses
- Land subsidence affecting land uses
- Seawater intrusion (not applicable here)

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Undesirable Results, Minimum Thresholds, and Measurable Objectives

Undesirable Result – significant and unreasonable conditions for any of the six sustainability indicators

Minimum Threshold (MT) – numeric value used to define undesirable results for each sustainability indicator

Measurable Objective (MO) – specific, quantifiable goal to track the performance of sustainable management

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Sustainability Criteria Considerations for Temescal Basin

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Subsidence

- Subsidence is lowered ground surface resulting from collapse of subsurface materials, commonly related to pumping and dewatering fine grained units
- Not a known issue and undesirable results not reported
- But potential exists for undesirable results
  - Reduction in drainage capacity; drainage problems
  - Impacts on grade of facilities, e.g. pipelines, roads, runways
  - Subsidence around a wellhead, e.g., casing collapse
  - Non-recoverable loss of storage capacity in the aquifers

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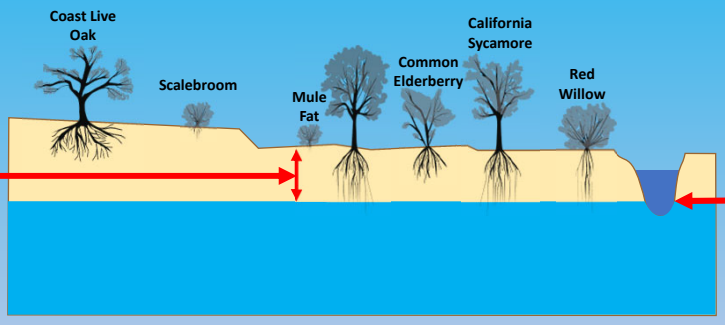
Interconnected Surface Water

For Riparian Vegetation: About 20 to 30 feet



For Stream Flow Depletion: Stream Bed Elevation

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Reduction of Groundwater Storage

- Storage is connected to water levels and the intent is to make sure there is enough water to meet the needs of the beneficial uses and users
- GSP regulations allow use of groundwater level MTs and MOs as a proxy, provided that the GSP demonstrate a correlation between groundwater levels and storage

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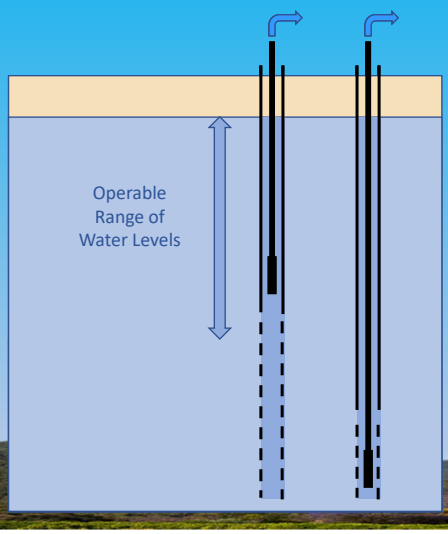
Groundwater Levels

What undesirable effects do we want to avoid?

- Impacts to shallow wells?
- Maintenance of municipal and industrial water supply?
- Other?



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Water Quality

- Numeric value used to define significant and unreasonable degraded water quality throughout the basin
- In setting MTs for degraded water quality, GSAs shall consider local, state, and federal water quality standards applicable to the basin
- Basin Plan and Maximum Concentration Limits
  - 10 mg/L Nitrate as N (both)
  - 770 mg/L TDS (basin plan) and 500 mg/L (MCL)

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Discussion / Q&A

- Are you aware of undesirable results that have occurred in the past?
- Are there specific undesirable results you are concerned about?
- Comments on the Sustainability Goal:

  To sustain groundwater resources for the current and future beneficial uses of the Temescal Basin in a manner that is adaptive and responsive to the following objectives:
  - Provide a long-term, reliable and efficient groundwater supply for municipal, industrial, and other uses
  - Provide reliable storage for water supply resilience during droughts and shortages
  - Protect groundwater quality
  - Support beneficial uses of interconnected surface waters, and
  - Support integrated and cooperative water resource management.

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Public Comment
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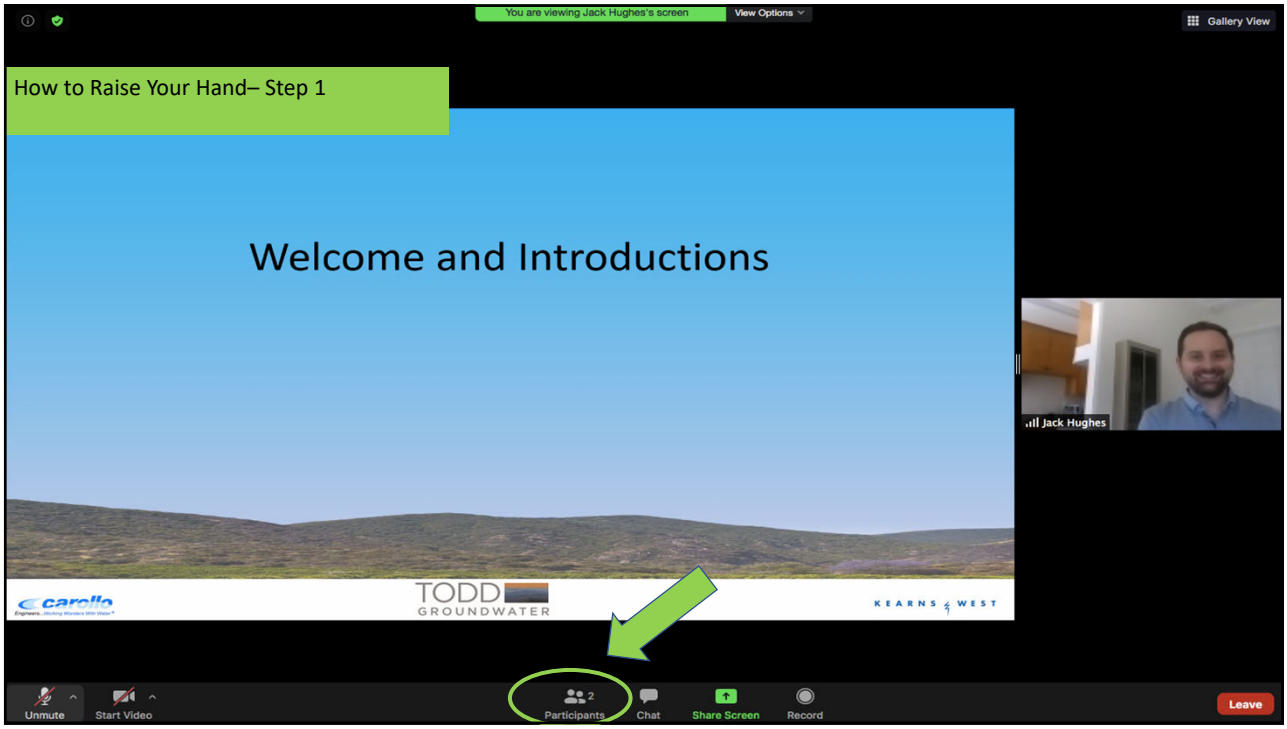
You are viewing Jack Hughes's screen
View Options
Gallery View
How to Raise Your Hand– Step 1
Welcome and Introductions
Jack Hughes
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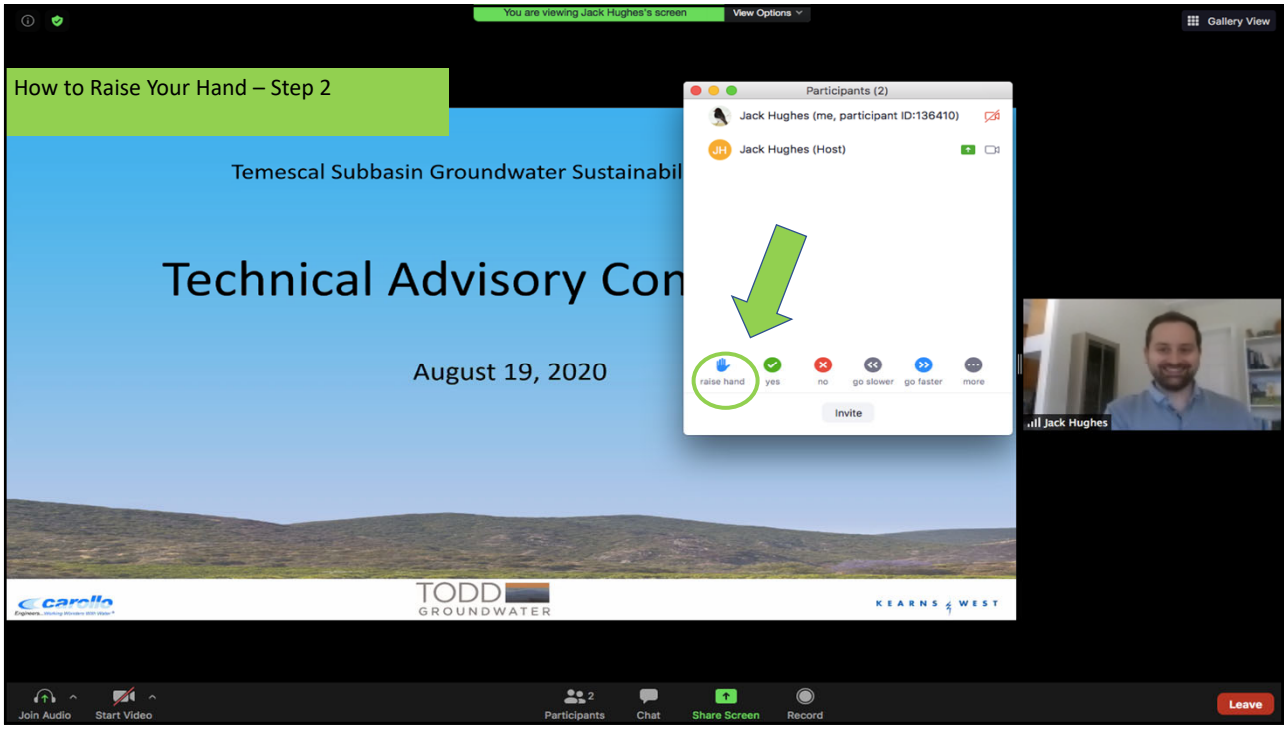
Unmute
Start Video
Participants
2
Chat
Share Screen
Record
Leave


How to Raise Your Hand – Step 2
You are viewing Jack Hughes's screen
View Options
Gallery View
Participants (2)
Jack Hughes (me, participant ID:136410)
Jack Hughes (Host)
raise hand
yes
no
go slower
go faster
more
Invite
Temescal Subbasin Groundwater Sustainabil
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August 19, 2020
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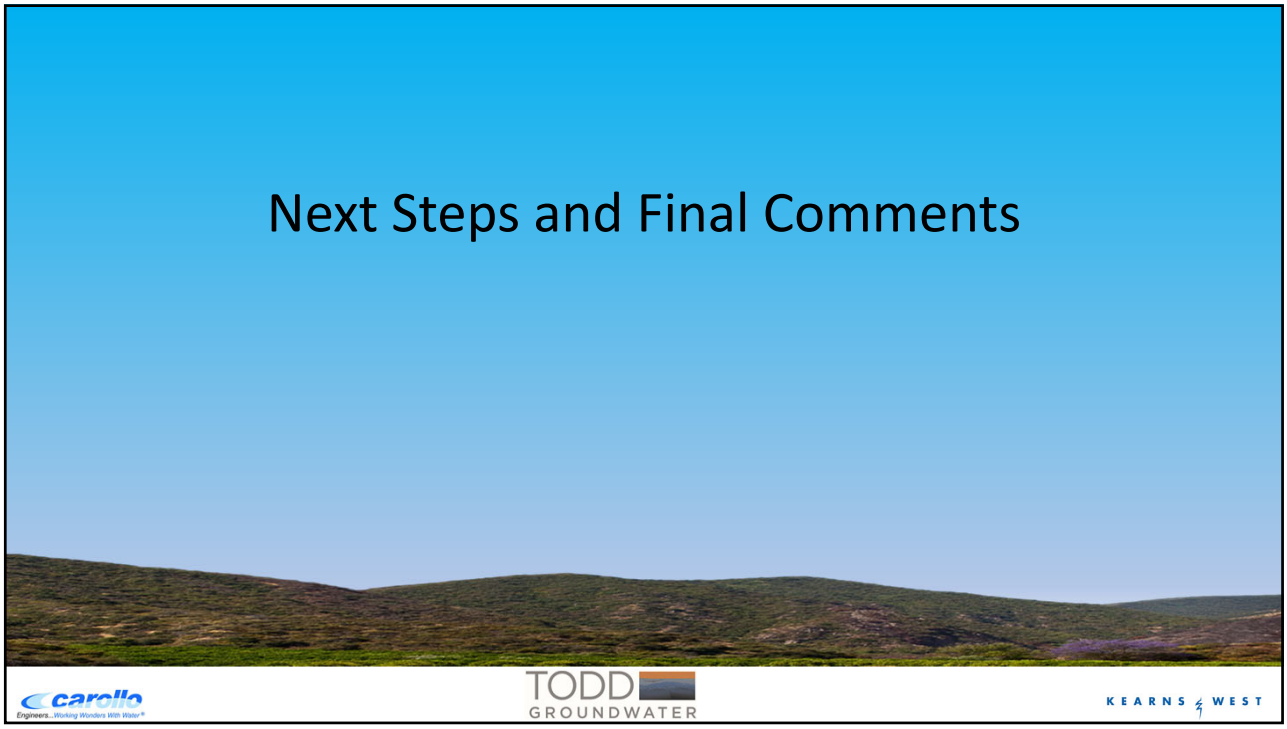
Next Steps and Final Comments
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Next Steps

- Continue Technical Analyses
  - Prepare internal draft Water Budget chapter of the GSP
  - Continue numerical model analysis
  - Continue sustainability criteria development
- Administrative Draft HCM and GW Conditions chapters of the GSP provided to TAC November 17th, all ***comments back by December 4th***.
- Prepare for and hold Public Workshop 2 (date TBD)
- Next TAC meeting February 17, 2021
  - Update on technical analyses
  - Present sustainability criteria

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Thank You!

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Technical Advisory Committee Meeting 3

Meeting Summary

Wednesday, February 17, 2020
1:00 p.m. – 3:00 p.m.
Location: Zoom Virtual Meeting

Attendees

Technical Advisory Committee Members

- Ava Moussavi, Riverside County Flood Control and Water Conservation District
- Chad Blais, City of Norco Public Works Department
- Eric Lindberg, California Regional Water Quality Control Board – Santa Ana Region
- Jacque Casillas, Mayor, City of Corona
- Katie Hockett, City of Corona Department of Water and Power
- Roberta Reed, 3M Industrial Mineral Products Division
- Timothy Ballon, All American Asphalt
- Tom Moody, City of Corona Department of Water and Power
- Wes Speake, Vice Mayor, City of Corona

Additional City of Corona Department of Water and Power Staff

- Kristian Alfelor
- Melissa Estrada-Maravilla

Consultant Team

- Chad Taylor, Todd Groundwater
- Gus Yates, Todd Groundwater
- Maureen Reilly, Todd Groundwater
- Alyson Scurlock, Kearns & West
- Jack Hughes, Kearns & West
- Joan Isaacson, Kearns & West

Summary

1. Welcome and Introductions

Joan Isaacson, facilitator from Kearns & West, welcomed all to the third meeting of the Temescal Groundwater Sustainability Agency (Temescal GSA) Technical Advisory Committee (TAC). She led roundtable introductions for TAC members and the consultants assisting the Temescal GSA with meeting facilitation and preparation of the Temescal Groundwater Sustainability Plan (Temescal GSP).

2. Overview of Meeting Agenda

Isaacson reviewed the meeting agenda (see Appendix A). The focus was providing an update on the status of the Temescal GSP, presenting the draft sustainability criteria and getting input from TAC members, and providing an overview of Public Workshop 2.

3. Temescal GSP Status

Chad Taylor, Principal Hydrogeologist at Todd Groundwater, provided a status update on the Temescal GSP. The Hydrogeologic Conceptual Model and Groundwater Conditions chapters are now complete and posted to the Temescal GSA website for the public to access. The Numerical Model, which is used to calculate the water budget, and the Water Budget chapter, are underway and will include forecast modeling for growth and climate change.

Taylor described coordination meetings that have taken place with GSA representatives of neighboring basins, including the Orange County Water District, Chino Basin Watermaster, and Western Municipal Water District. All are willing to share information and data and are interested in reviewing documents as they become available. Todd Groundwater will continue to coordinate with stakeholders in neighboring basins, especially with the Western Municipal Water District and Chino Basin Watermaster to ensure the water budget for the Temescal Basin is similar to the ones they have prepared. For more information on the Temescal GSP Status, see pages 4 through 5 in Appendix B.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

4. Draft Sustainability Criteria Presentation and Discussion

Before presenting the draft sustainability criteria for the Temescal Basin, Taylor reviewed the following sustainability goal that was presented at the last TAC meeting on November 18, 2020:

To sustain groundwater resources for the current and future beneficial uses of the Temescal Basin in a manner that is adaptive and responsive to the following objectives:

- Provide a long-term, reliable, and efficient groundwater supply for municipal, industrial, and other uses;
- Provide reliable storage for water supply resilience during droughts and shortages;
- Protect groundwater quality;
- Support beneficial uses of interconnected surface waters; and
- Support integrated and cooperative water resource management.

Taylor explained that according to the Sustainable Groundwater Management Act, there are six sustainability indicators for which they must develop criteria. The six indicators include chronic lowering of groundwater levels, reduction of groundwater storage, degradation of water quality, land subsidence affecting land uses, depletions of interconnected surface water affecting beneficial uses, and seawater intrusion. Seawater intrusion is not applicable in the inland Temescal Basin. The five applicable indicators will be evaluated for the Temescal Basin.

Next, Taylor explained the factors relating to and defining sustainability that will be developed for each sustainability indicator. These include undesirable results, minimum thresholds, and measurable objectives. Undesirable results are significant and unreasonable conditions for any of the six sustainability indicators. Minimum thresholds are numeric values used to define undesirable results.

Measurable objectives are specific, quantifiable goals used to track the performance of sustainable management. Lastly, he recapped the known beneficial uses in the Temescal Basin that were discussed by TAC members at the previous meeting. See pages 6 through 23 in Appendix B for more information on the draft sustainability criteria.

Chronic Lowering of Groundwater Levels

Taylor presented the sustainability criteria for chronic lowering of groundwater levels. Undesirable results for this indicator can occur progressively as water levels fall. These results can include increased pumping costs/decreased pump output, entrained air and/or broken suction on pumps, exposed screens, cascading water in the well, increased clogging of screens and/or accelerated corrosion, reduced saturated aquifer thickness, and reduced aquifer capacity. Taylor explained that the minimum threshold for defining undesirable results relative to chronic lowering of groundwater levels is defined at each key well by the historic minimum static groundwater elevation (or maximum historical depth to groundwater). Undesirable results are indicated when exceedances occur in measurements from two consecutive quarters in each of two consecutive years, in two-thirds or more of the key wells.

Taylor displayed the table of key wells, which are a subset of the current water level monitoring wells with representative records that continue to be monitored. The key wells table includes wells in the principal channel aquifer and secondary aquifers and wells that have been monitored a long time. Most wells have had historic maximum depths to groundwater within the last 10 years and the pump intake depth for most wells is below the historic depth to water. Taylor reviewed the measurable objective to maintain groundwater levels above the historic maximum depth to water, which maintains groundwater levels within the historical operating range. In summary, the water level conditions are currently sustainable and historic static lows will be used as the minimum threshold; the objective is to be above historical static lows.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- Having visuals to accompany the data would be helpful.
- Seeing how long the wells have been operational is good, but it would be nice to know how the differences between relate to the location of the wells. It seems shallower wells are closer to the river and deeper wells are farther away.

Reduction of Groundwater Storage

Taylor presented the sustainability criteria for reduction of groundwater storage, noting that storage is connected to water levels. He explained that GSP regulations allow the use of groundwater level minimum thresholds and measurable objectives as a proxy, and that the historic minimum-based water level threshold is well-suited for use as a proxy for groundwater storage. Undesirable results are defined as insufficient supply to support beneficial uses during droughts. Since groundwater storage is related to water levels, undesirable results are also associated with groundwater level declines.

Taylor explained the minimum threshold for groundwater storage, which is the same for groundwater levels. Using the historical minimum maintains the historical operational storage range in the principal channel aquifer and protects the most productive wells. The measurable objective for storage is also

fulfilled by the measurable objective for groundwater levels, which maintains groundwater levels within the historical operating range. In summary, there is currently sufficient storage in the Temescal Basin and water level sustainability criteria will be used as a proxy for storage.

Discussion/Q&A

There were no questions or comments from the TAC members for this sustainability criteria.

Degradation of Water Quality

Maureen Reilly, Senior Engineer at Todd Groundwater, presented the sustainability criteria for degradation of water quality. She explained that the Temescal GSA is not responsible for local problems or degradation caused by others and that groundwater quality is under regulatory oversight by state agencies. However, the Temescal GSA is responsible for increased concentrations of water quality constituents due to groundwater management, such as through recharge and changes in pumping patterns relating to groundwater management. Undesirable results for this indicator will focus on total dissolved solids and nitrate, with other constituents being tracked as well. Total dissolved solids are both naturally occurring and anthropogenic. High nitrate concentrations in the Temescal Basin may be a result of previous agricultural or wastewater disposal. Because high concentrations of total dissolved solids and nitrate can limit beneficial uses, the main users of water either treat or blend groundwater.

To help inform measurable objectives, Reilly reviewed what other agencies in the basin are already doing. Water quality objectives have been defined in the Regional Water Quality Control Board Santa Ana Basin Plan and by the State of California in drinking water maximum contaminant levels. Nitrate levels have been set at 45 milligrams per liter (mg/L) and total dissolved solids levels have been set at 770 mg/L in the Regional Water Quality Control Board Santa Ana Basin Plan. She noted that total dissolved solids have a secondary maximum contaminant level for aesthetics which is 1,000 mg/L. Todd Groundwater looked at average concentrations in wells in the Temescal Basin before water entered the treatment process in the last 5 years. This showed 58 percent of wells exceeding the nitrate maximum contaminant levels and 33 percent exceeding the total dissolved solids secondary maximum contaminant level. Reilly explained that while concentrations at some wells exceed the maximum contaminant levels, all water delivered to end users meets all local, state, and federal standards.

Reilly described the minimum threshold for water quality as a statistically significant increase in the percentage of wells with 5-year averages exceeding the maximum contaminant level for total dissolved solids and/or nitrate, relative to current conditions. Statistically significant is defined as more than a 10 percent increase in the number of wells in a 5-year period. The measurable objective for total dissolved solids and nitrate is to maintain or reduce the percentage of wells with average concentrations exceeding the threshold based on conditions assessed in each 5-year Temescal GSP update. In summary, total dissolved solids and nitrate concentrations are elevated in some Temescal Basin wells, but all water delivered meets local, state, and federal drinking water standards through the use of treatment and blending facilities. The threshold is based on the number of currently affected wells.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- The first question asked for confirmation of the water quality threshold being a change from the present, even though some wells currently exhibit issues. A consultant team member

stated that current water quality constituents already exist, and the threshold is set to avoid any future degradation to water quality.

- Another question asked was whether the statistically significant change identified as 10 percent was based on any standards. A consultant team member explained that 10 percent is what other GSAs are using because anything less than 10 percent is typically within the natural variability of the data.
- TAC members discussed if maintaining current nitrate levels would be achievable without making any other changes in runoff and discharge from the surrounding areas. A consultant team member said that maintaining current levels could be compromised by legacy nitrate loading from historic agricultural uses. The nitrates flow slowly through the system and may not have reached groundwater or monitored wells yet. This will be important to monitor and report on in the 5-year Temescal GSP updates. A TAC member added that Corona has a desalination facility that assists in nitrate removal. The facility will help to improve water quality in the future, but it takes time. Nitrates are still being applied as part of fertilizers, but the nitrate fertilizer was more common when most of the basin's agricultural activity was made up of orange groves. The small size and relatively shallow groundwater conditions in the Temescal Basin reduces the potential for legacy loading compared to other basins.

Land Subsidence Affecting Land Uses

Reilly presented the sustainability criteria for land subsidence affecting land uses and explained that when water is removed from the aquifer, fine-grain materials can compact and the ground surface can decline. Undesirable results for subsidence include damage to drainage channels; reduction in flood management capacity; damage to facilities; impacts on the grade of infrastructure such as pipelines, roads, and highways; damage to wellheads; casing failures; and non-recoverable loss of groundwater storage as fine-grained layers collapse. Subsidence in the Temescal Basin has been estimated by satellite via remote sensing using InSAR data provide by DWR going back to 2015. This method has a margin of error of approximately 0.1 feet. InSAR datasets estimate ground surface change in the Temescal Basin ranging between a rise of 0.08 feet to a fall of 0.08 which is very small and within the margin of error. She noted that none of these undesirable results have been observed in the Temescal Basin but that they will continue to be monitored over time.

Reilly presented the minimum threshold for subsidence, defined as a rate of decline equal to or greater than 0.2 feet in any 5-year period. This has been considered in terms of a cumulative decline equal to or greater than one foot of decline since 2015, which represents current conditions and aligns with the Sustainable Groundwater Management Act start date. The measurable objective is conceptually zero subsidence, while acknowledging measurement error and other uncertainties. In summary, there is no known current or historical subsidence in the Temescal Basin. The threshold is based on potential impacts to infrastructure using remotely sensed ground surface changes.

Discussion/Q&A

There were no questions or comments from the TAC members for this sustainability criteria.

Depletions of Interconnected Surface Water Affecting Beneficial Uses

Gus Yates, Senior Hydrogeologist at Todd Groundwater, presented the sustainability criteria for depletions of interconnected surface water affecting beneficial uses. He explained that groundwater

close to the surface can interact with vegetation or stream flows. Vegetation that relies on groundwater is referred to as phreatophytes and ecosystems that rely on groundwater are referred to as groundwater dependent ecosystems. Yates displayed a map showing the potential groundwater dependent ecosystems in the Temescal Basin and focused on the Prado Basin area. Depths in all wells around the Prado Basin and trends for groundwater levels, groundwater pumping, river flow, and rainfall were analyzed to determine if the Prado wetlands were supported by groundwater. The conclusion is that the Prado wetlands are more dependent on surface flows. Changes in surface inflows have much more influence than changes in groundwater pumping or levels to the north or south. More monitoring is needed in the southern Prado Basin and between Prado and central Temescal Basin pumping.

Yates explained the undesirable results for interconnected surface water. Declining groundwater levels in areas with riparian vegetation can reduce water availability to phreatophytic plant species, which are ones that extend roots to the water table and extract groundwater during the dry season when soil moisture is depleted. Another undesirable result is die-back, or mortality of Prado Basin vegetation. The minimum threshold for depletion of interconnected surface water is historical minimum water levels (maximum depth to water) in shallow monitoring wells in the southern Prado area, correlated with Temescal Basin pumping or water levels. The measurable objective for interconnected surface water is an amount of depletion that is less than the amount specified as the minimum threshold. Given that the objective is based on historical conditions, no specific rise in shallow groundwater levels or increase in stream flow is identified as providing a preferred set of groundwater dependent ecosystem conditions. In summary, changes in surface inflows have much more influence than changes in groundwater pumping or levels to the north or south; additional monitoring in the southern Prado Basin is needed.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- TAC members said the presentation of the sustainability criteria was great.
- TAC members discussed the interplay of groundwater and surface water with the Prado wetlands. It was suggested that other stakeholders have interests in the health of the Prado wetlands and the surrounding water quality concerns. TAC members thought there was a lot of value in adding monitoring near the Prado wetlands to better understand the nearby groundwater practices.

5. Public Workshop 2

Jack Hughes, Kearns & West, provided an overview of the second public workshop on March 2, 2021 from 4:00-6:00 p.m. The public workshop will be held virtually on the Zoom platform and will be streamed on the City of Corona Facebook page, website, and on Corona TV. Spanish interpretation will be available for those in the Zoom meeting. The second public workshop will focus on the Hydrogeologic Conceptual Model, Groundwater Conditions, and Water Budget. Additionally, the project team is currently finalizing the second fact sheet. The second fact sheet will accompany the emails sent to interested parties and will be posted to the Temescal GSA website to provide the public an opportunity to learn about the topics prior to the workshop. Hughes invited TAC members to attend the second public workshop and to help spread the word to others who might be interested. See page 24 in Appendix B for more information.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- TAC members discussed the attendance at the first public workshop and ways to publicize the second workshop. About 13 people attended the first public workshop and additional participants connected via live streaming. The consultant team is finalizing the invitation materials for the second public workshop and will send them to TAC members for assistance with distribution.

6. Public Comment

No members of the public provided comment.

7. Next Steps and Wrap Up

Isaacson summarized next steps for the consultant team and TAC members. The consultant team will continue conducting the technical analyses, including the Water Budget calculations and Numerical Model analysis. The consultant team will also continue preparing the Sustainability Criteria Temescal GSP chapter and begin drafting the Monitoring Program Temescal GSP chapter. Additional next steps include the upcoming second public workshop, to be held on March 2, 2021, and the final TAC meeting on May 19, 2021. The final TAC meeting will focus on the Water Budget and Groundwater Model and include discussion of projects and management actions.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- Review times for the Draft Sustainability Criteria Temescal GSP and Monitoring Program Temescal GSP chapters were discussed. TAC members should expect to receive the chapters to review in March.

Appendix A

Meeting Agenda

Temescal GSP

Technical Advisory Committee Meeting 3

February 17, 2020

1:00 – 3:00 p.m.
Zoom Meeting: https://zoom.us/j/96317714187

DRAFT Agenda

1) Welcome and Introductions

2) Overview of Meeting Agenda

3) Temescal GSP Status
   - Hydrogeologic Conceptual Model and Groundwater Conditions Chapters
   - Coordination with Neighboring Basins
   - Discussion/Q&A

4) Draft Sustainability Criteria Presentation and Q&A/Discussion
   - Sustainability Goal
   - Beneficial Uses Recap
   - Draft Sustainability Criteria
     - Chronic Lowering of Groundwater Levels
     - Reduction of Groundwater Storage
     - Degradation of Water Quality
     - Land Subsidence
     - Depletions of Interconnected Surface Water
     - Seawater Intrusion – Not applicable

5) Public Workshop 2
   - Virtual Workshop, March 2, 2021, 4-6 p.m.
   - Focused on Hydrogeologic Conceptual Model, Groundwater Conditions, and Water Budget
   - Discussion/Q&A

6) Public Comment

7) Next Steps and Wrap Up

Appendix B

Presentation Slides

Temescal Groundwater Sustainability Agency

Technical Advisory Committee

February 17, 2021

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Welcome and Introductions

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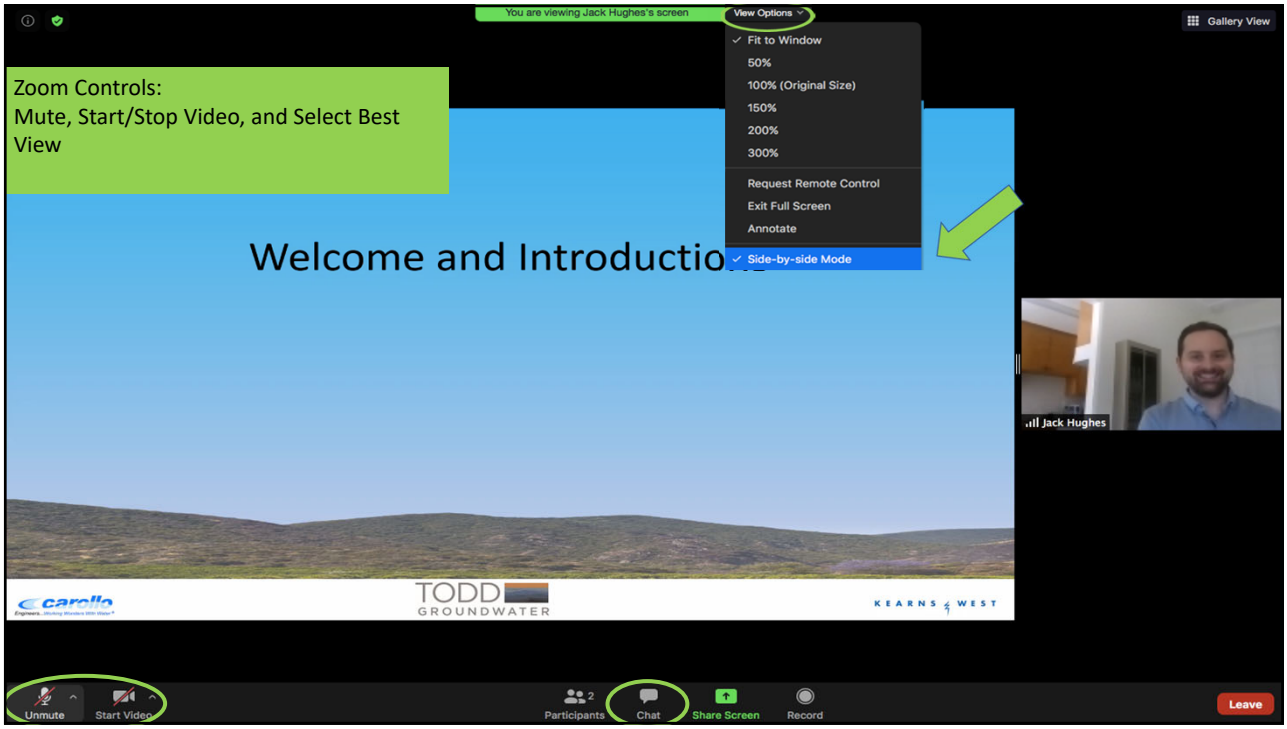

Tips for a Productive Discussion

- Let one person speak at a time
- Help make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Overview of Meeting Agenda

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Meeting Agenda

1. Welcome and Introductions
2. Overview of Meeting Agenda
3. Temescal GSP Status
4. Draft Sustainability Criteria Presentation and Discussion
5. Public Workshop 2
6. Public Comment
7. Next Steps and Wrap Up

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Temescal GSP Status

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Where are we now in Temescal GSP process?

- Hydrogeologic Conceptual Model (HCM) and Groundwater Conditions chapters posted to GSA website
- Water Budget analyses and chapter and numerical model are underway

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Coordination with Neighboring Basins

- Consultant team and GSA meetings with neighboring groundwater basins:
  - Orange County Water District
  - Chino Basin Watermaster
  - Arlington Basin GSA/Western Municipal Water District
- All willing to share information and data
- Coordination will continue

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Discussion / Q&A

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Draft Sustainability Criteria

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Sustainability Goal

To sustain groundwater resources for the current and future beneficial uses of the Temescal Basin in a manner that is adaptive and responsive to the following objectives:

- Provide a long-term, reliable and efficient groundwater supply for municipal, industrial, and other uses
- Provide reliable storage for water supply resilience during droughts and shortages
- Protect groundwater quality
- Support beneficial uses of interconnected surface waters, and
- Support integrated and cooperative water resource management.

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Sustainability Indicators

- Chronic lowering of groundwater levels
- Reduction of groundwater storage
- Degradation of water quality
- Depletions of interconnected surface water affecting beneficial uses
- Land subsidence affecting land uses
- Seawater intrusion (not applicable here)

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Undesirable Results, Minimum Thresholds, and Measurable Objectives

Undesirable Result – significant and unreasonable conditions for any of the six sustainability indicators

Minimum Threshold (MT) – numeric value used to define undesirable results for each sustainability indicator

Measurable Objective (MO) – specific, quantifiable goal to track the performance of sustainable management

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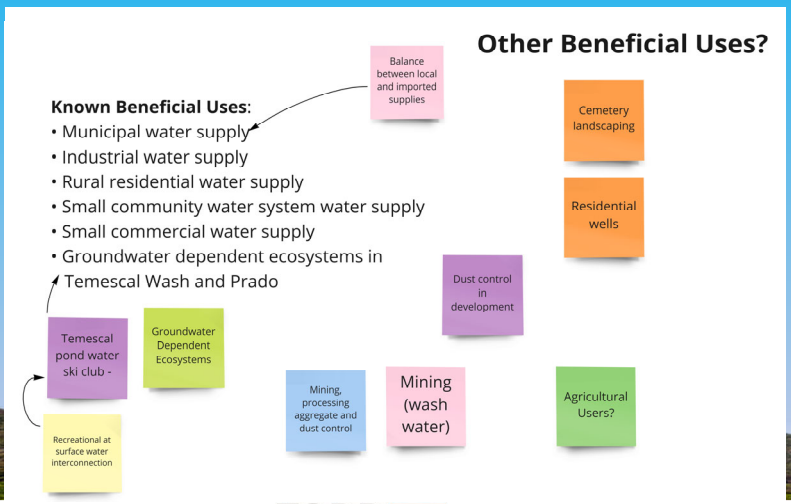
Beneficial Uses from Last TAC Meeting



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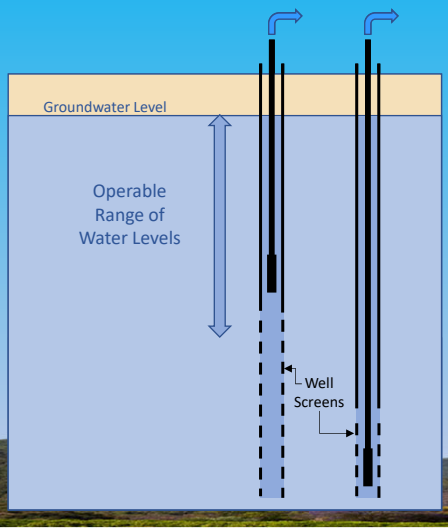
Undesirable Results - Groundwater Levels

Groundwater level declines result in a sequence of increasing undesirable results:

1. Increased pumping costs and a decrease in pump output
2. Entrained air and or broken suction on pumps
3. Exposed screens, cascading water in the well, increased clogging of screens, and/or accelerated corrosion
4. Reduced saturated aquifer thickness and reduced aquifer capacity



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Minimum Threshold - Groundwater Levels

The Minimum Threshold for defining undesirable results relative to chronic lowering of groundwater levels is defined at each Key Well by the historic minimum static groundwater elevation (maximum historical depth to groundwater)

Undesirable results are indicated when exceedances occur in measurements from two consecutive quarters in each of two consecutive years, in two-thirds or more of the Key Wells

Key Wells are a subset of the current water level monitoring wells with representative records that will continue to be monitored

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Minimum Threshold - Groundwater Levels

Local Well Name	Earliest Monitoring Date	Average Depth to Groundwater (ft bgs)	Pump Intake Depth (ft bgs)	Date of Static Maximum Depth to Groundwater	Maximum Static Depth to Groundwater (ft MSL)
Corona 7A	6/1/2002	156.84	230	1/1/2003	178
Corona 8	12/13/2012	112.6	No Pump	5/4/2014	129.5
Corona 8A	1/1/1998	119.69	200	10/1/2001	169
Corona 9A	7/1/2002	80.72	220	7/1/2002	242
Corona 11	7/18/1959	134.14	180	9/13/2017	158
Corona 11A	12/6/2017	143.48	221.2	5/31/2014	155.2
Corona 12A	3/1/1993	158.59	280	11/2/2005	164
Corona 13	2/1/1977	141.19	182	6/1/1989	174
Corona 14	2/1/1924	184.92	250	5/1/2009	239
Corona 15	8/13/1952	116.63	180	12/1/2004	134
Corona 16	12/13/2012	140.3	No Pump	7/2/2018	159.5
Corona 17A	6/1/2002	110.63	180	5/13/2006	125
Corona 19	4/1/1992	102.73	200	9/1/2003	124.5
Corona 22	4/1/2001	150.19	370	5/1/2004	153.3
Corona 25	4/1/2001	61.71	180	7/1/2003	161.5
Corona 26	5/1/2001	136.86	333	10/1/2004	340.5
Corona 27	3/1/2003	154.19	436.7	3/3/2020	211
Corona 28	3/1/2003	90.59	170	9/6/2016	95.2
Corona 29	3/18/2009	88.63	230	8/1/2018	88.2
Corona 30	8/28/2009	56.9	No Pump	4/24/2014	70.6
Corona 31	3/18/2009	95.13	271	8/7/2009	132.2
Corona 33	3/13/2019	58.80	255	2/4/2020	68.1
Corona 10th/Lincoln	11/17/2011	197.5	No Pump	9/21/2013	204

Measurable Objective - Groundwater Levels

The Measurable Objective is to maintain groundwater levels above the historical maximum depth to water (minimum groundwater elevation), equivalent to the Minimum Threshold.

This maintains groundwater levels within the historical operating range

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Summary/Questions/Comments – Groundwater Levels

Summary:

- Water level conditions are currently sustainable
- Historical static lows will be used as the Minimum Threshold, and Objective is to be above historical static lows

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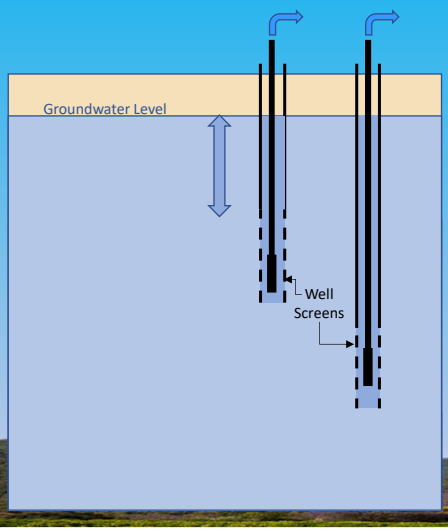
Reduction of Groundwater Storage

- Storage is connected to water levels
- GSP regulations allow use of groundwater level Minimum Thresholds and Measurable Objectives as a proxy
- Historical minimum-based water level threshold is well suited to use as a proxy

Undesirable Results - Groundwater Storage

- Insufficient supply to support beneficial uses during droughts.
- Storage is related to groundwater levels and undesirable results are associated with groundwater level declines.



Minimum Threshold - Groundwater Storage

The Minimum Threshold for storage is fulfilled by the minimum threshold for groundwater levels

Groundwater level thresholds have been defined to reflect historical conditions, which is also protective of storage

Groundwater level thresholds and objectives are sufficiently protective to ensure prevention of significant and unreasonable results relating to storage

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Measurable Objective - Groundwater Storage

The Measurable Objective for storage is fulfilled by the Measurable Objective for groundwater levels, which maintain groundwater levels within the historical operating range.

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Summary/Questions/Comments – Groundwater Storage

Summary:

- There is currently sufficient storage in the Temescal Basin
- Water level criteria used as proxy for storage

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Water Quality

The GSA is not responsible for local problems or degradation caused by others and groundwater quality is under regulatory oversight by State Agencies.

The GSA is responsible for increased concentrations in water quality due to management (recharge, pumping).

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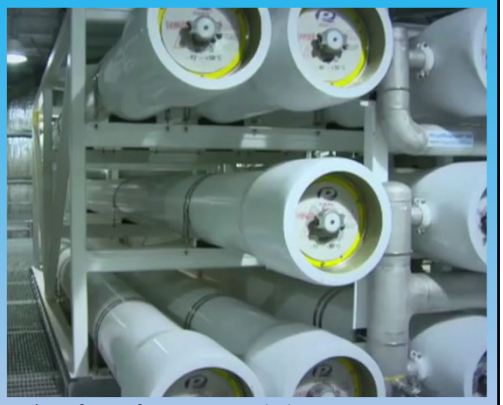
Undesirable Result - Water Quality

Focus will be on total dissolved solids (TDS) and nitrate (other constituents will be tracked, too).

TDS is both naturally occurring and anthropogenic.

High nitrate concentrations in the Temescal Basin may be a result of previous agricultural or wastewater disposal (septic systems and other).

High concentrations of TDS and nitrate could limit beneficial uses. The main users of water treat or blend groundwater before use



(one form of treatment includes Reverse Osmosis pictured here)

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Minimum Threshold - Water Quality

Beneficial uses of water and water quality objectives are defined in the RWQCB Santa Ana Basin Plan and by the State in drinking water maximum contaminant levels (MCLs).

- Nitrate has a primary MCL for health concern whereas TDS has a secondary MCL for aesthetics.

	RWQCB Basin Plan (mg/L)	MCL (mg/L)
Nitrate (NO3)	45	45
TDS	770	1,000

Current ambient conditions (average concentrations in monitored wells between 2014 and 2019):

- 58 Percent of wells exceed nitrate MCL
- 33 Percent of wells exceed TDS Secondary MCL

While concentrations at some wells exceed the MCLs, all water delivered to end users meet all local, state, and federal standards.

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Threshold and Objective - Water Quality

Minimum Threshold - Statistically significant increase in the percentage of wells with averages exceeding the MCL for TDS and nitrate, relative to current conditions. *Statistically significant is defined as more than 10 percent increase in number of wells in 5-year period.*

The Measurable Objective for nitrate and TDS is to maintain or reduce the percentage of wells with average concentrations exceeding the threshold, MCL, based on conditions assessed in each 5-year Temescal GSP update

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Summary/Questions/Comments – Water Quality

Summary:

- TDS and nitrate concentrations are elevated in some Temescal Basin wells
- Treatment and blending facilitates municipal use – all water delivered meets local, state, and federal drinking water standards
- Threshold is based on currently affected number of wells

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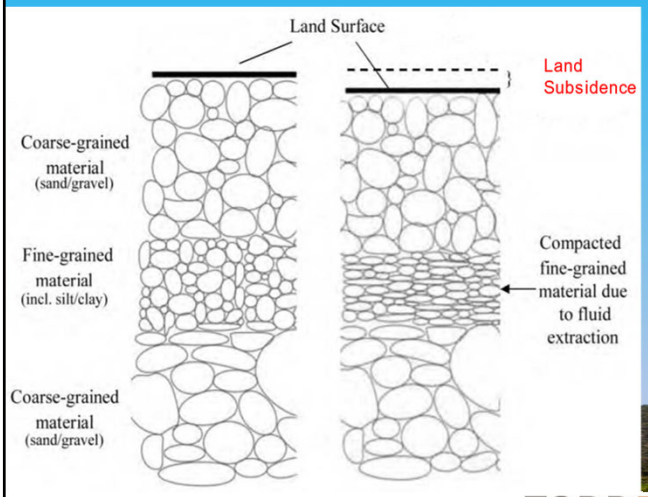
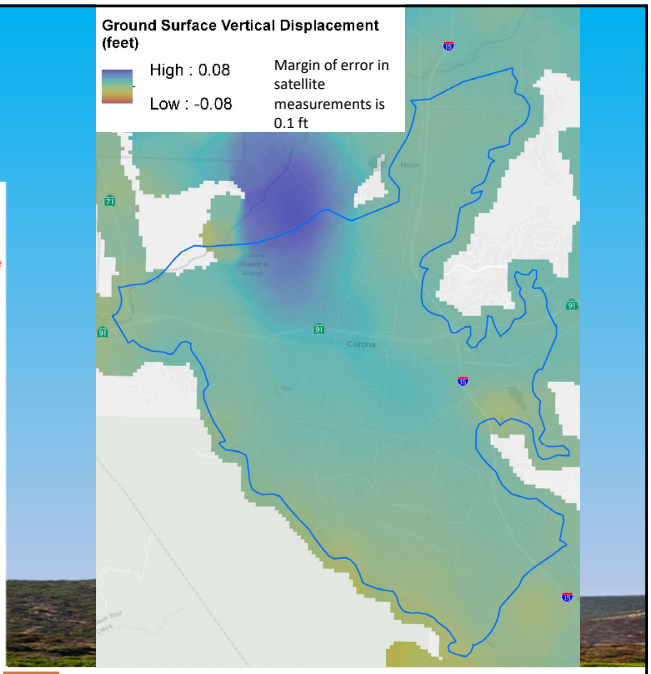
Subsidence





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Undesirable Result - Subsidence

Differential subsidence can affect:

- Drainage channels
- Reducing flood management capacity
- Damaging facilities
- Affecting the grade of infrastructure such as pipelines, roads, and highways
- Damaging wellheads or causing casing failure
- Non-recoverable loss of groundwater storage as fine-grained layers collapse

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Minimum Threshold - Subsidence

The Minimum Threshold for subsidence is defined as a rate of decline equal to or greater than 0.2 feet in any five-year period.

This has been considered in terms of a cumulative decline equal to or greater than one foot of decline since 2015.

2015 represents current conditions and the SGMA start date.

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Measurable Objective - Subsidence

The Measurable Objective is conceptually zero subsidence while acknowledging measurement error and other uncertainties.

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Summary/Questions/Comments – Subsidence

Summary:

- No known current or historical subsidence in the Temescal Basin
- Threshold based on potential impacts to infrastructure using remotely sensed ground surface changes

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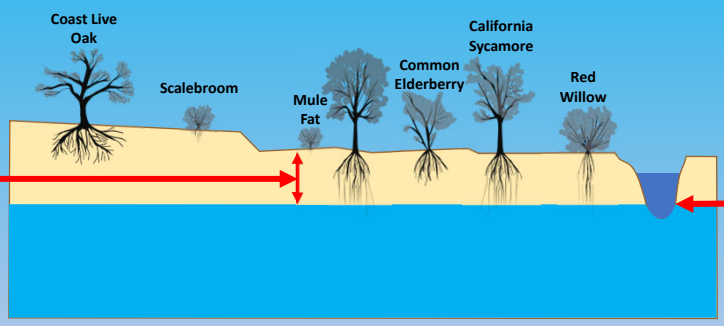
Interconnected Surface Water

For Riparian Vegetation: About 20 to 30 feet



For Stream Flow Depletion: Stream Bed Elevation

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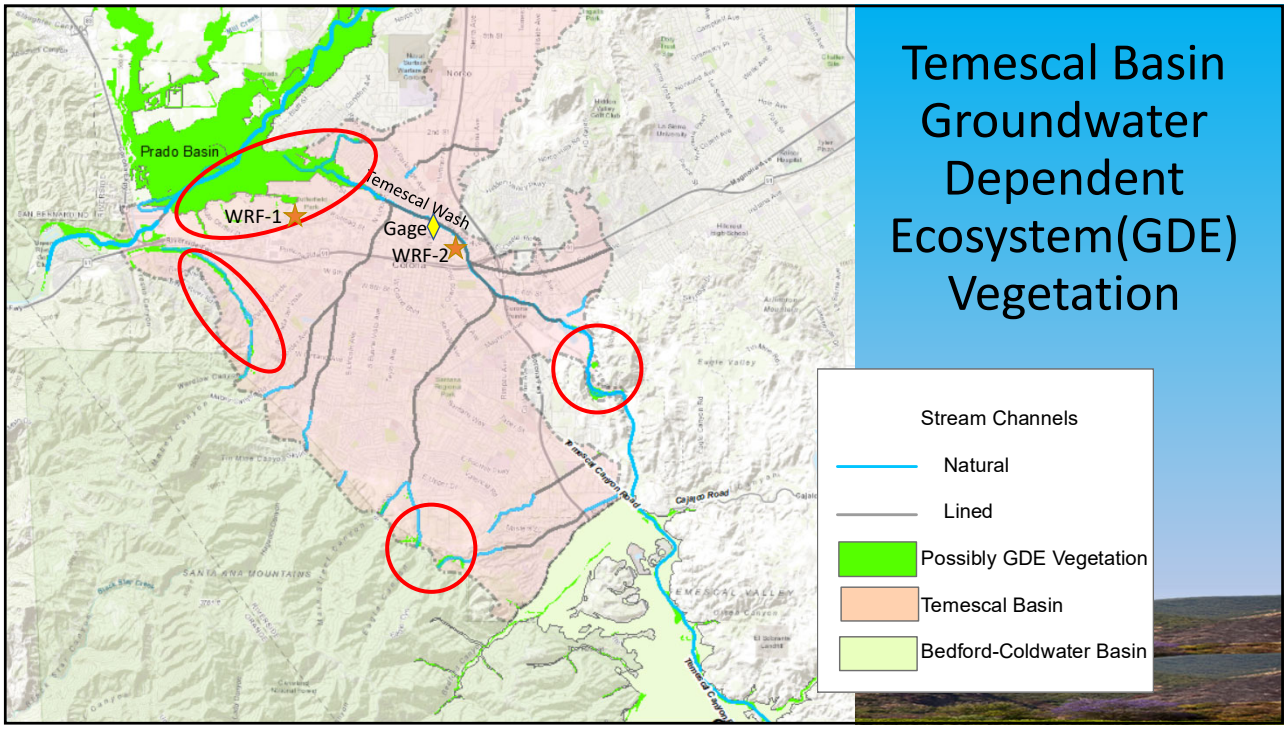
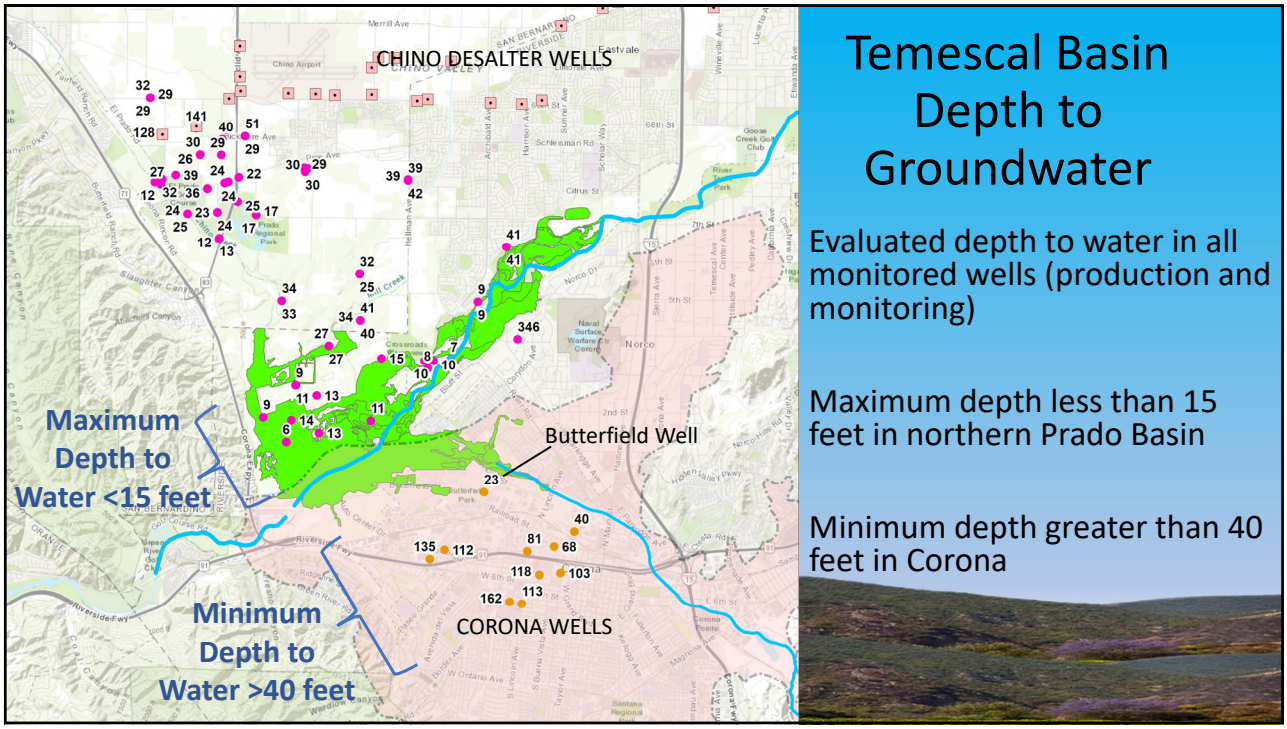


Temescal Basin Groundwater Dependent Ecosystem(GDE) Vegetation



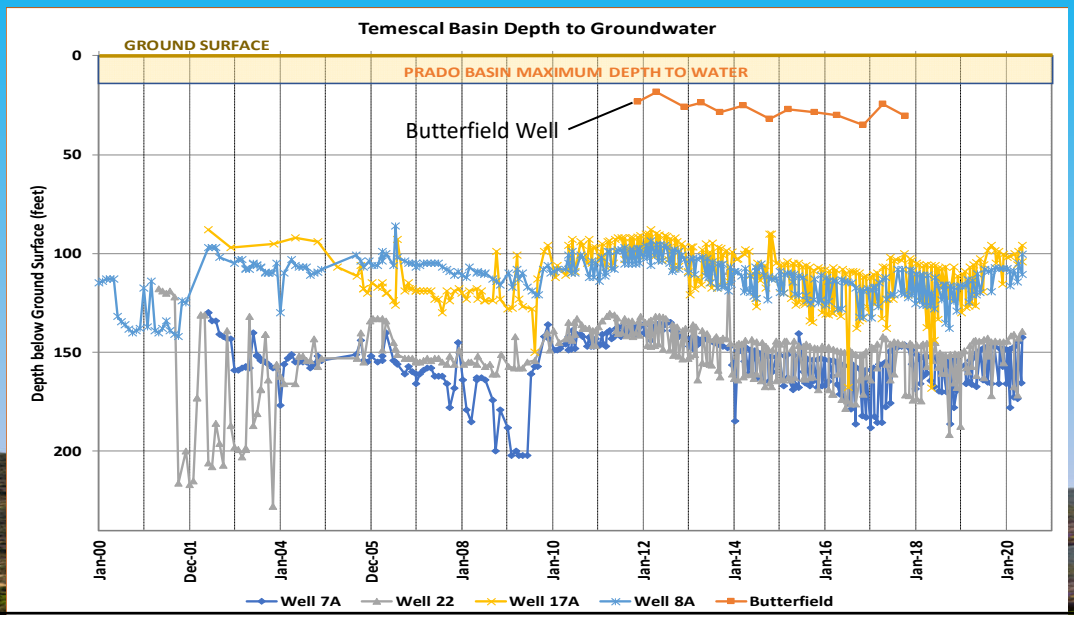
Temescal Basin Depth to Groundwater

Evaluated depth to water in all monitored wells (production and monitoring)

Maximum depth less than 15 feet in northern Prado Basin

Minimum depth greater than 40 feet in Corona

Temescal Basin Depth to Groundwater



Factors Affecting Prado Groundwater Levels

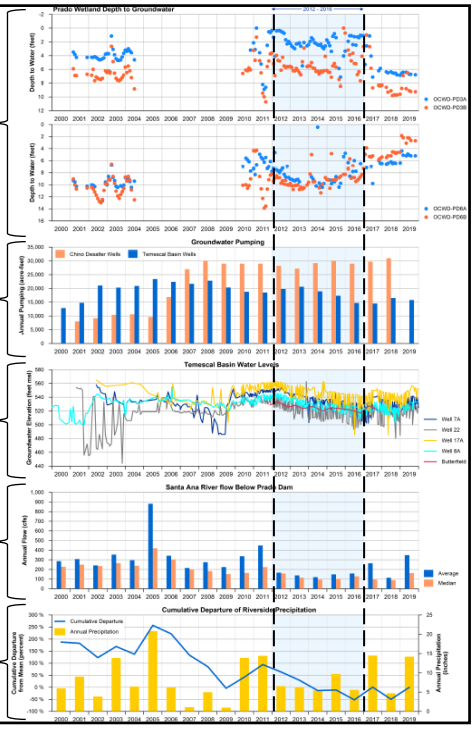
Prado Groundwater Levels

GW Pumping — North / South

Temescal Groundwater Levels

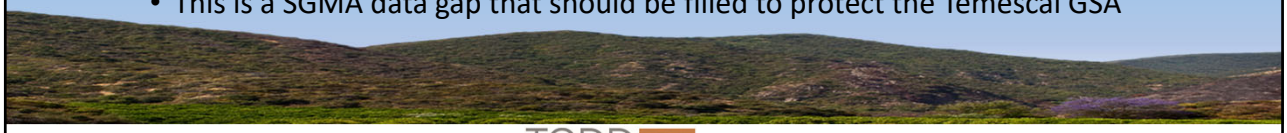
Santa Ana River Flow

Rainfall



Interconnected Surface Water / Groundwater Dependent Ecosystem (GDE) Conclusions:

- Prado wetlands were supported by groundwater prior to development.
- Now they are more dependent on surface inflows
- Changes in surface inflows have much more influence than changes in groundwater pumping or levels to the north or south
- More monitoring is needed in the southern Prado Basin and between Prado and southern Temescal Basin pumping
  - This is a SGMA data gap that should be filled to protect the Temescal GSA



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Undesirable Result - Interconnected Surface Water / Groundwater Dependent Ecosystem

- Declining groundwater levels in areas with riparian vegetation can reduce water availability to phreatophytic plant species, which are ones that extend roots to the water table and extract groundwater during the dry season when soil moisture is depleted.
- Die-back or mortality of Prado Basin vegetation

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Minimum Threshold - Interconnected Surface Water / Groundwater Dependent Ecosystem

The Minimum Threshold for depletion of interconnected surface water is historical minimum water levels (maximum depth to water) in shallow monitoring wells in the southern Prado area, correlated with Temescal Basin pumping or water levels.

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Measurable Objective - Interconnected Surface Water / Groundwater Dependent Ecosystem

The Measurable Objective for interconnected surface water is an amount of depletion that is less than the amount specified as the Minimum Threshold

Given that the objective is based on historical conditions, no specific rise in shallow groundwater levels or increase in stream flow is identified as providing a preferred set of GDE conditions

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Summary/Questions/Comments – Interconnected Surface Water / Groundwater Dependent Ecosystem

Summary:

- Changes in surface inflows have much more influence than changes in groundwater pumping or levels to the north or south
- Additional monitoring in southern Prado is needed

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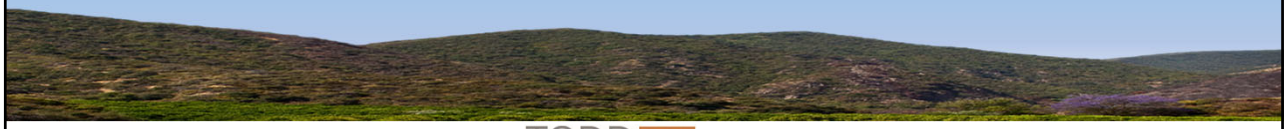
Discussion / Q&A



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Public Workshop 2

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Public Workshop 2

- March 2, 2021, 4 to 6 PM
- Focused on Hydrogeologic Conceptual Model, Groundwater Conditions, and Water Budget
- Fact Sheet No. 2 to accompany this workshop will be available soon
- Virtual workshop link: (https://zoom.us/j/93530179115)
- Please forward invite to interested parties

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Discussion / Q&A

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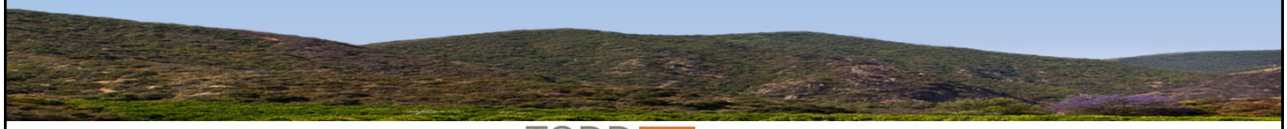
Public Comment



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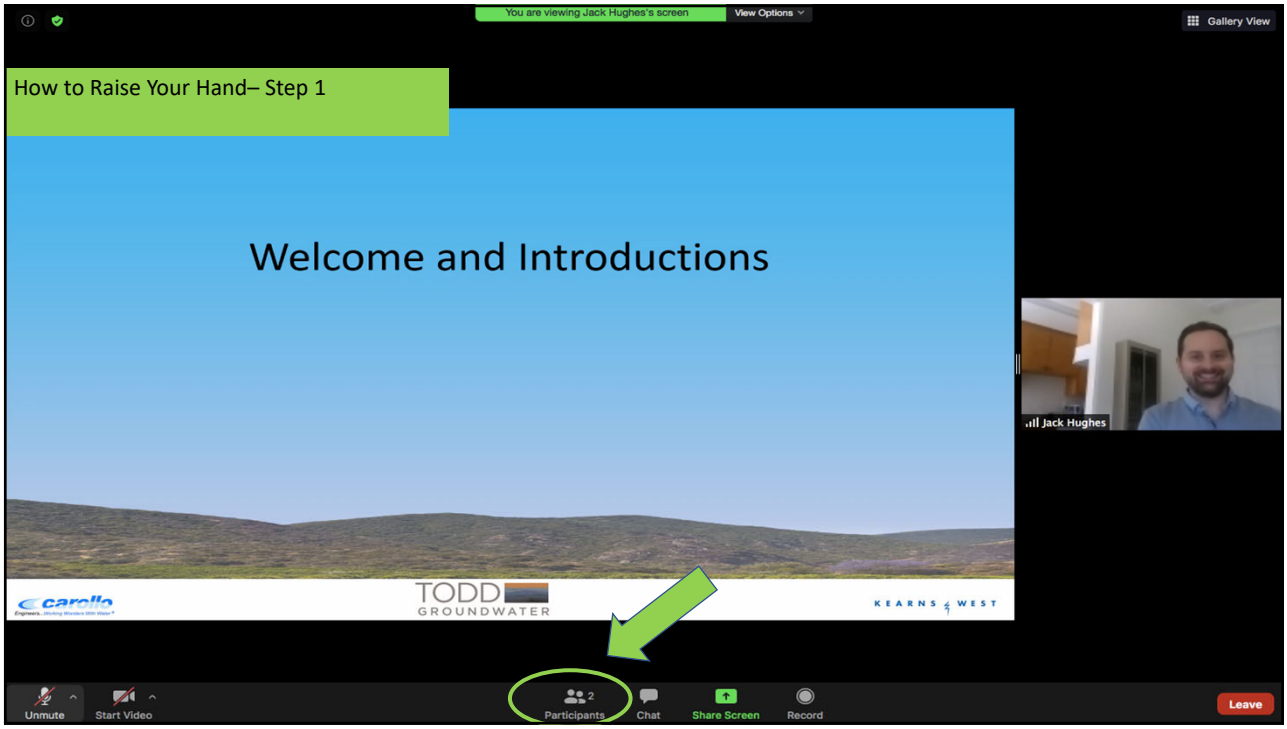
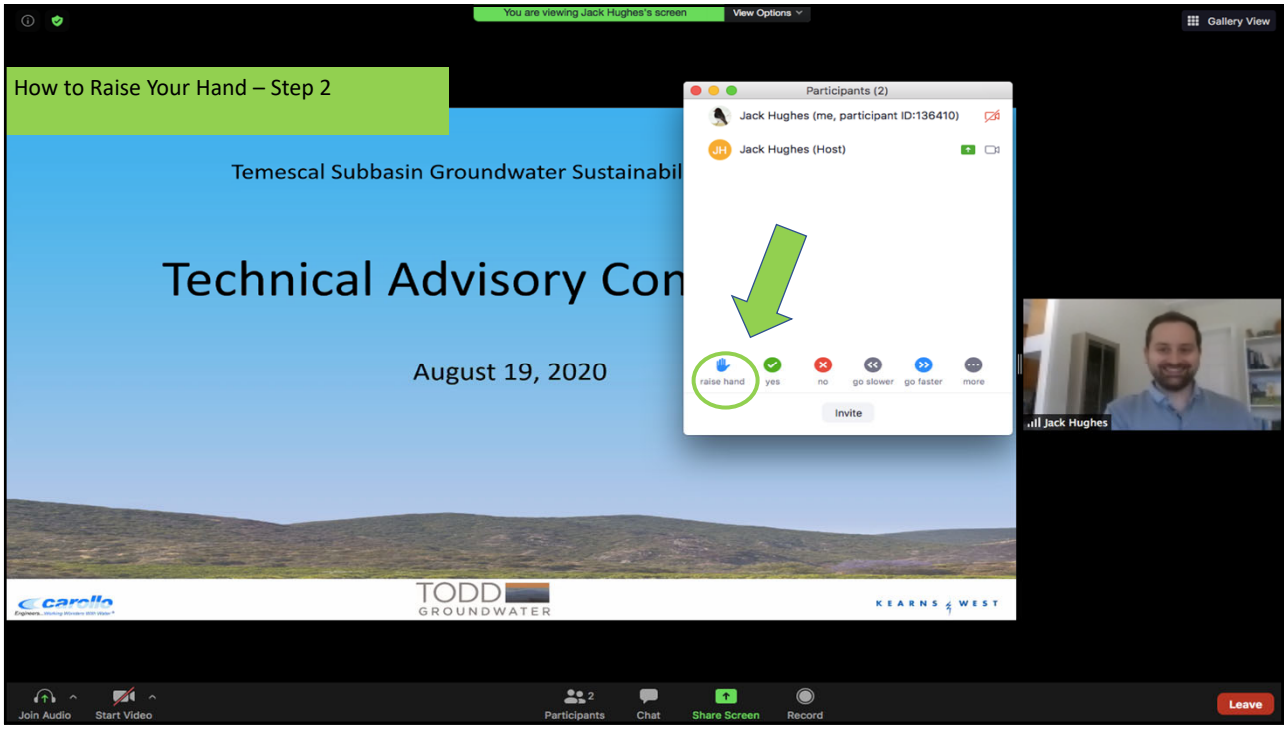

How to Raise Your Hand– Step 1
You are viewing Jack Hughes's screen
View Options
Gallery View
Welcome and Introductions
Jack Hughes
Unmute
Start Video
Participants
Chat
Share Screen
Record
Leave


How to Raise Your Hand – Step 2
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View Options
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Temescal Subbasin Groundwater Sustainabil
Technical Advisory Con
August 19, 2020
Participants (2)
Jack Hughes (me, participant ID:136410)
Jack Hughes (Host)
raise hand
yes
no
go slower
go faster
more
Invite
Jack Hughes
Join Audio
Start Video
Participants
Chat
Share Screen
Record
Leave

Next Steps and Wrap Up

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Next Steps

- Continue Technical Analyses
  - Continue Water Budget calculations
  - Continue numerical model analysis
  - Prepare draft Sustainability Criteria Temescal GSP chapter
  - Begin work on Monitoring Program Temescal GSP chapter
- Prepare for and hold Public Workshop 2 (March 2, 2021)
  - Zoom Link : https://zoom.us/j/93530179115
- Next TAC meeting May 19, 2021
  - Water budget and groundwater model
  - Discussion of Projects and Management Actions
- Questions or comments to groundwater@coronaca.gov

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Thank You!
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Technical Advisory Committee Meeting 4

Meeting Summary

Wednesday, June 16, 2021
1:00 p.m. – 3:00 p.m.
Location: Zoom Virtual Meeting

Attendees

Technical Advisory Committee Members

- Ava Moussavi, Riverside County Flood Control and Water Conservation District
- Eric Lindberg, California Regional Water Quality Control Board – Santa Ana Region
- Jacque Casillas, Mayor, City of Corona
- Katie Hockett, City of Corona Department of Water and Power
- Roberta Reed, 3M Industrial Mineral Products Division
- Tom Moody, City of Corona Department of Water and Power

Additional City of Corona Department of Water and Power Staff

- Kristian Alfelor
- Melissa Estrada-Maravilla

Consultant Team

- Chad Taylor, Todd Groundwater
- Gus Yates, Todd Groundwater
- Phyllis Stanin, Todd Groundwater
- Elisa Garvey, Carollo Engineers
- Inge Wiersema, Carollo Engineers
- Madison Rasmus, Carollo Engineers
- Alyson Scurlock, Kearns & West
- Jack Hughes, Kearns & West
- Joan Isaacson, Kearns & West

Summary

1. Welcome and Introductions

Joan Isaacson, facilitator from Kearns & West, welcomed all to the fourth meeting of the Temescal Groundwater Sustainability Agency (Temescal GSA) Technical Advisory Committee (TAC). She led roundtable introductions for TAC members and the consultants assisting the Temescal GSA with meeting facilitation and preparation of the Temescal Groundwater Sustainability Plan (Temescal GSP).

2. Overview of Meeting Agenda

Isaacson reviewed the meeting agenda (see Appendix A). The focus of the meeting was providing an update on the status of the Temescal GSP and the water budget, presenting the draft projects and management actions and getting input from TAC members, and giving an overview of the third public workshop.

3. Temescal Groundwater Sustainability Plan Status

Chad Taylor, Principal Hydrogeologist at Todd Groundwater, provided a status update on the Temescal GSP. The Monitoring Network (Chapter 7), Projects and Management Actions (Chapter 8), Plan Implementation (Chapter 9), and Introduction (Chapter 1) chapters are currently in review by the Temescal GSA and will be distributed to the TAC for review in late June. The Water Budget (Chapter 5) and Sustainability Criteria (Chapter 6) chapters are in final review by the consultant team and will be distributed to the Temescal GSA in late June and to the TAC in early July. After receiving comments from the Temescal GSA and TAC on the remaining chapters, a draft of the Temescal GSP will be compiled and prepared for public release.

Taylor described the Temescal GSP review period and adoption process. The draft Temescal GSP will be posted in late July or early August and will have a 90-day public review period that will extend to October or November. The revised GSP is estimated to be ready for adoption by the Temescal GSA in November or December 2021 to meet the submittal deadline to the California Department of Water Resources (DWR) by January 31, 2022.

Taylor discussed the role of the TAC moving forward, which includes reviewing and providing comments on the draft chapters and inviting their constituents, communities, and any other interested parties to the upcoming third public workshop that will take place on July 8, 2021. He also asked the TAC to help spread the word when the draft of the Temescal GSP is posted for public review.

After the Temescal GSP is adopted, the TAC may be involved in the implementation phase; any future TAC meetings will be convened on an as-needed basis. The TAC will be informed of other Temescal GSP activities through routine notifications. For more information on the Temescal GSP Status, see pages 4 through 5 in Appendix B.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

4. Water Budget Presentation

Gus Yates, Senior Hydrogeologist at Todd Groundwater, presented on the water budget, what it is, and how it is being developed. The water budget quantifies the inflows and outflows of the Temescal Basin over time in addition to the change in groundwater storage. Both inflows and outflows vary from year to year depending on hydrology and management. Yates described the process for estimating items in the water budget. Items that can be measured or calculated directly and thus serve as model inputs include dispersed recharge, wastewater percolation, groundwater pumping, and surface water inflows at the model boundary. Other items that are derived from model outputs are stream percolation, groundwater discharge to streams and the Prado Wetlands, subsurface boundary flows, and changes in storage.

Yates reviewed dispersed recharge using a rainfall-runoff-recharge model diagram. He detailed the different ways in which water percolates through land including rainfall recharge, irrigated recharge, and runoff from impervious surfaces that can flow into pipes, the Prado Wetlands, or to pervious surfaces to become focused recharge. He noted that all percolation goes to the shallow groundwater zone, some of which becomes baseflow in streams. In the main part of the Temescal Basin, most deep percolation enters the regional aquifer system. Yates also reviewed a map of the 286 recharge polygons under evaluation, which the consultant team identified based on locations where recharge occurs and specific land uses that contribute to recharge. The recharge polygons extend east and west of the Temescal Basin to cover surface tributaries that drain into the basin. The model extends into the southern Chino Basin to characterize the interaction between basins and the Prado Wetlands.

Yates next described stream recharge in the Temescal Basin. He displayed the natural stream channels where percolation occurs and the cement-lined stream channels or pipelines where no percolation occurs that are included in the model. Stream channels in the Temescal Basin are far above the water table and the depth to groundwater decreases moving towards the northwest portion of the basin. In the Prado Wetlands area, the land surface and water table are close enough together that vegetation roots can reach the groundwater. Overall, percolation is not affected by groundwater levels except in the Prado Wetlands area.

Yates described subsurface inflow and outflow, which includes mountain-front recharge and percolation through fractures in the bedrock. The Temescal Basin was separated into four different zones and water budgets were developed for each. These water budget zones include the channel aquifer in the middle of the basin where most groundwater pumping occurs, the alluvial fan aquifer which makes up the remainder of the basin, the tributary watersheds which contribute inflows to the Temescal Basin, and the Chino Basin. Yates noted that groundwater pumping is concentrated in the channel aquifer.

Yates next discussed the water budget analysis periods that were selected. The Sustainable Groundwater Management Act (SGMA) requires three time periods be analyzed: historical, current, and future. For the historical time period, 1993-2007 was chosen, and for the current time period, 2010-2013 was chosen; both time periods were chosen based on average climate conditions. The future time period is represented by 1993-2017 repeated twice since the required time period was 50 years. In addition, Yates discussed a graph showing the cumulative departure of rainfall, which is how the analysis periods were chosen, noting that there were much bigger wet and dry events in the 1993-2017 portion of graph.

Lastly, Yates presented the surface water and groundwater budgets. The surface water budget looks at inflows and outflows to surface waterways. Since creek channels are mostly concrete-lined and far above the water table in the Temescal Basin, there is little percolation, and the percolation rate is not affected by the groundwater level. The Prado Wetlands is the only area where groundwater and surface water interact. For the groundwater budget, Yates noted that quantitative results are still under review but that some general patterns are emerging. First, the largest sources of recharge in the Temescal Basin are reclaimed water percolation, followed by rain, irrigation, and pipe leaks, and stream percolation and subsurface inflow. Next, the yield of the channel aquifer depends on the inflow from the alluvial fan aquifer area; groundwater pumping is 60-75% of basin outflows. Lastly, the channel aquifer yields approximately the same amount as current pumping. Increasing pumping will not increase yield. For more information on the Water Budget (Chapter 5), see pages 6 through 12 in Appendix B.

Discussion/Q&A

Isaacson opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- The first question asked if the general patterns for recharge consider changes in land use over time. A consultant team member replied that the basin was mostly urbanized in the past as it is today.
- Another question asked if there was an estimate of how much of the area was developed and how much runoff increased with urbanization. A consultant team member explained that in the 1990s, about one-third to one-half of the basin was not urbanized and most development occurred in the 1990s and early 2000s. A TAC member added that there was a study conducted in the last few years that estimated a 6,000 acre-feet loss of recharge due to urbanization in the watershed.
- A TAC member asked about the relationship between cumulative deviation from the mean, production, and groundwater levels during the period where the Temescal Basin may be in overdraft. A consultant team member stated that the measured hydrographs are variable with some dating back to the 1990s where large declines in groundwater levels can be seen. In the last 10 years, the level of urban development has been steady but in 2012, wastewater management changed slightly along with continued drought conditions, so there might have been a slight decline in the groundwater levels in wells. The decline in storage in the water budget seen to date is approximately 4 percent of the total outflow, which is within the margin of error for most water budget analyses. The future baseline scenario in the model will provide more information to confirm or disprove that and answer this question.

5. Draft Projects and Management Actions Presentation and Discussion

Elisa Garvey, Engineer at Carollo Engineers, presented the draft projects and management actions for the Temescal GSP. She explained the three groupings of actions: baseline, planned, and potential future. Baseline refers to existing or established commitments to projects or actions. Planned actions are developed and evaluated projects or actions. Potential future actions describe projects or actions to be implemented later to achieve sustainability goals.

Garvey began by describing the baseline projects. The first is groundwater treatment at the Temescal Desalter to reduce nitrates, total suspended solids (TSS), total dissolved solids (TDS), and other contaminants of concern for the drinking water supply. The second project is water reclamation facility (WRF) percolation ponds that discharge from City of Corona-owned WRFs to percolation ponds that recharge the Temescal Basin. The third project includes water-level quality assurance and quality control activities that maintain the reliability of ongoing groundwater elevation data. The final project Garvey presented was the Western Riverside County Regional Authority (WRCRWA) plant that will soon produce recycled water for local irrigation use.

Garvey next reviewed the baseline management actions. These include Water Shortage Contingency Plans, which are plans that detail the stages of water shortage and conservation response based on a city's available supply and deficit, and Water Conservation Programs, which include response actions to reduce water use in the stages of a water shortage. Additional management actions include the Western

Municipal Water District Integrated Regional Water Management Plan, which is a coordinated, long-range regional water quantity and quality management strategy, and the Temescal GSA's involvement in the Santa Ana Watershed Project, which is a coordinated management group formed to protect the Santa Ana River Basin and associated water resources.

Garvey then reviewed the three projects included in planned actions. First, the Potable Reuse Feasibility Study will look at the possible use of future reclaimed water supply. Second, the mountain runoff capture investigation would explore options for operational changes to allow for additional benefit of groundwater recharge using storm event runoff at the edges of the basin adjacent to the Santa Ana mountains that is collected in Riverside County Flood Control and Water Conservation District basins. Lastly, the interconnected surface water monitoring wells project would include three shallow monitoring wells drilled into the Prado Management Area to allow for groundwater elevation monitoring.

Madison Rasmus, Environmental Engineer at Carollo Engineers, provided more information on the interconnected surface water monitoring wells project since its implementation date is within the first year of Temescal GSP adoption. Wells will be sited in the southern area of the Prado Management Area. There is no active groundwater monitoring in this location so drilling wells will allow the Temescal GSA to better understand the relationship between the basin and interconnected water in the Prado Wetlands. The project will consist of three groundwater wells about 40-60 feet deep that will allow for continuous groundwater elevation data collection in the area. The data will be incorporated in the 5-year GSP update and monitoring wells will inform future management actions in the Santa Ana River Watershed.

Lastly, Garvey presented potential future actions. Data collected from the Prado Management Area monitoring wells will be used as part of monitoring for undesirable results to interconnected surface water in Prado. If this monitoring identifies potential undesirable results to interconnected surface water in the Prado Management Area, then coordination will be needed with upstream Santa Ana River partners as a management action. If groundwater levels in the Prado Management Area are falling, this approach will allow for coordinated solutions. There are two additional future management actions. One is for future groundwater treatment, which would entail implementing advanced treatment for previously detected per- and polyfluoroalkyl substances (PFAS), TDS, nitrate, and trichloropropane (TCP). The other future management actions is for urban stormwater treatment, capture, and recharge, which is an exploration of urban stormwater harvesting to offset water supply and/or provide for groundwater recharge. For more information on the Projects and Management Actions (Chapter 8), see pages 13 through 16 in Appendix B.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

6. Public Outreach

Jack Hughes, Senior Associate from Kearns & West, provided an overview of upcoming outreach and engagement activities. The third public workshop will be held virtually on July 8, 2021 from 4:00-6:00 p.m. on the Zoom platform. It will be streamed on the City of Corona Facebook page, website, and on Corona TV. Spanish interpretation will be available for those in the Zoom meeting. The third public workshop will focus on the sustainability criteria and projects and management actions. The third fact sheet will accompany the emails sent to interested parties. The fact sheet will also be posted to the Temescal GSP website to provide the public an opportunity to learn about the topics prior to the

workshop. Hughes invited TAC members to attend the third public workshop and to help spread the word to others who might be interested.

In addition, the consultant team is preparing for a community leader meeting that will take place prior to the third public workshop to ensure the team is reaching a variety of stakeholders and hearing diverse interests. The purpose of the community leader meeting is to provide information on local water supply and learn about needs and perspectives in vulnerable communities. See pages 17 through 18 in Appendix B for more information.

Discussion/Q&A

There were no questions or comments from the TAC members for this agenda item.

7. Public Comment

No members of the public provided comment.

8. Next Steps and Wrap Up

Isaacson summarized next steps for the consultant team and TAC members. The consultant team will revise Chapters 1, 5, 6, 7, 8, and 9 based on GSA and TAC comments prior to compiling the complete GSP for public release. Additional next steps include the upcoming third public workshop on July 8, 2021 and preparation, finalization, adoption, and submittal of the GSP to DWR.

Discussion/Q&A

The team opened the floor for questions and discussion. Discussion, comments, and questions are summarized below.

- A TAC member expressed excitement for upcoming community leader engagement.
- A TAC member thanked the TAC for providing valuable input throughout the GSP process.

Appendix A

Meeting Agenda

Temescal GSP

Technical Advisory Committee Meeting 4

June 16, 2021

1:00 – 3:00 p.m.
Zoom Meeting: https://zoom.us/j/99711646541

Agenda

1) Welcome and Introductions

2) Overview of Meeting Agenda

3) Temescal GSP Status
   - Draft Chapters
   - GSP Review and Adoption
   - Technical Advisory Committee Look Ahead
   - Discussion/Q&A

4) Water Budget Presentation
   - Discussion/Q&A

5) Draft Projects and Management Actions Presentation and Discussion
   - Discussion/Q&A
     - Are there other potential groundwater related projects we should consider?
     - Do you have ideas for how the volume of groundwater in the Basin could be increased?
     - Do you have ideas for making groundwater more sustainable in the Basin?

6) Public Outreach
   - Virtual Workshop, July 8, 2021
   - Community Leader Meeting
   - Fact Sheet 3
   - Discussion/Q&A

7) Public Comment

8) Next Steps and Wrap Up

Appendix B

Presentation Slides

Temescal Groundwater Sustainability Agency

Technical Advisory Committee

June 16, 2021

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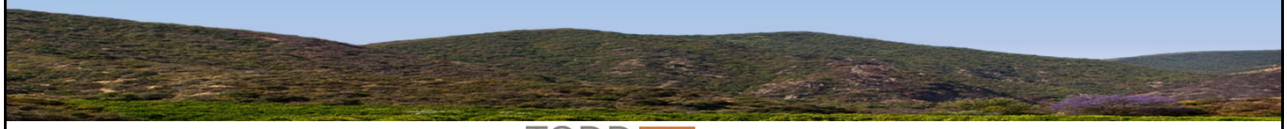
Welcome and Introductions



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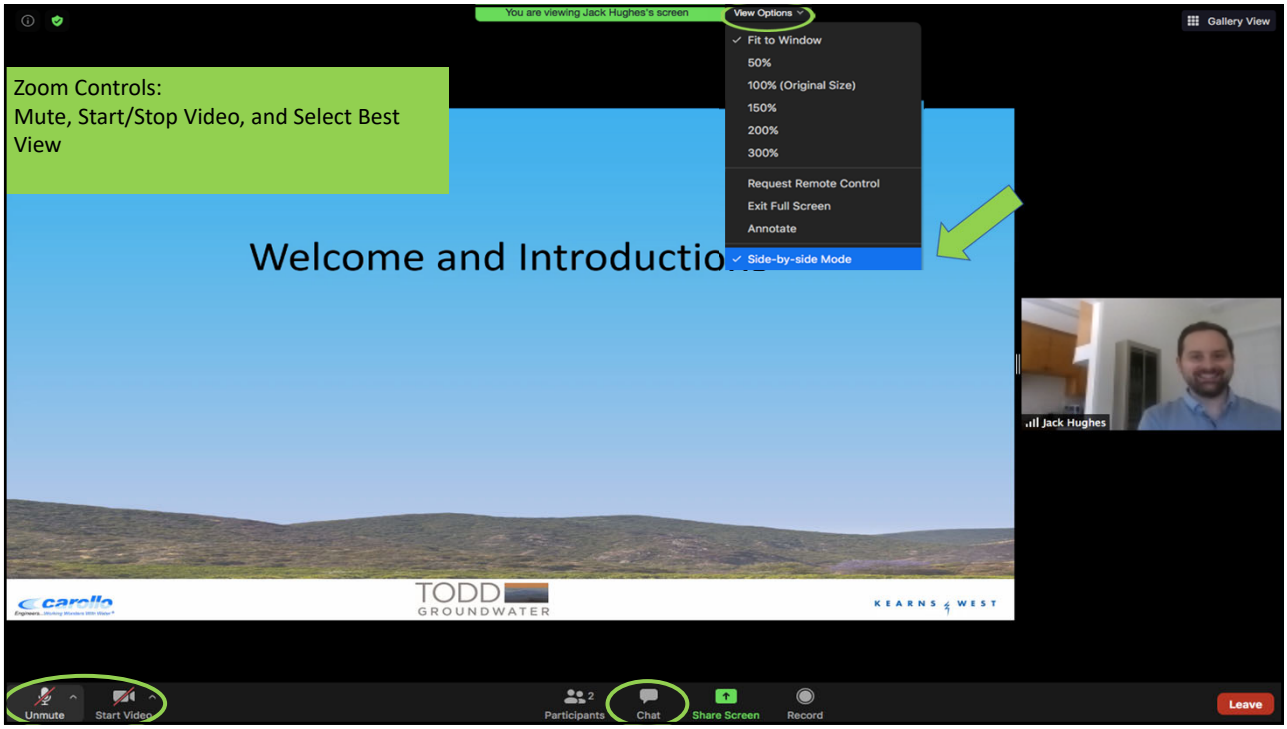

Tips for a Productive Discussion

- Let one person speak at a time
- Help make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Overview of Meeting Agenda

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Meeting Agenda

1. Welcome and Introductions
2. Overview of Meeting Agenda
3. Temescal GSP Status
4. Water Budget Presentation
5. Draft Projects and Management Actions Presentation and Discussion
5. Public Outreach
6. Public Comment
7. Next Steps and Wrap Up

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Temescal GSP Status

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Where are we in the Temescal GSP process?

- Monitoring Network (7), Projects and Management Actions (8), Plan Implementation (9), and Introduction (1) chapters in review by GSA now and will be distributed to TAC for review in the next two weeks
- Water Budget (5) and Sustainability Criteria (6) chapters are in final review by the consultant team and will be distributed to the GSA later this week with TAC distribution in early July
- This represents all remaining chapters of the GSP
- After receiving comments from the GSA and TAC, the complete GSP will be compiled and prepared for public release

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GSP Review and Adoption Process

- The complete GSP will be posted for public review in late July/early August
- 90-day public review period through October/November
- Revised GSP slated to be ready for GSA adoption November/December 2021
- Submittal deadline to State Department of Water Resources January 31, 2022

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Technical Advisory Committee Look-Ahead

- Review chapters 1, 5, 6, 7, 8, and 9, deadline for comments will be transmitted with chapter distribution
- Spread the word about the upcoming GSP activities
  1. Public workshop July 8th
  2. Fact Sheet 3
  3. Release of the complete GSP
  4. Community leader meeting
- Future TAC meetings during GSP implementation

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Temescal Basin Water Budget

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What is a Water Budget?

- A water budget quantifies the inflows and outflows of the Temescal Basin over time
- Both inflows and outflows vary from year to year, depending on hydrology or management
- Inflows - Outflows = Change in Storage

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Preliminary Historical Groundwater Budgets

- Water budget items
  - Measured or calculated; input to model
    - Dispersed recharge
    - Wastewater percolation
    - Pumping
    - Surface water inflows at model boundary
  - Head-dependent; ouput from model
    - Stream percolation
    - GW discharge to streams and Prado Wetlands
    - Subsurface boundary flows
    - Storage change

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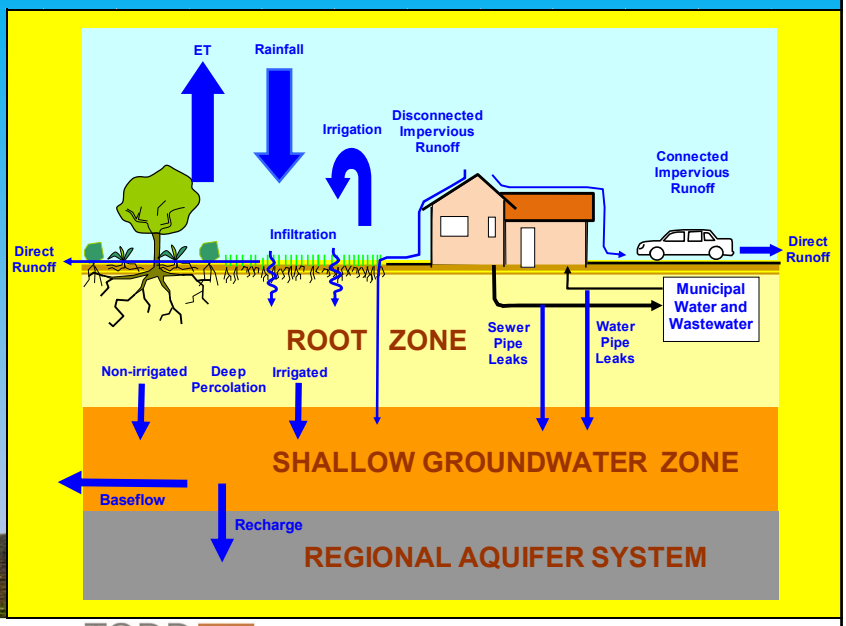
Dispersed Recharge

Rainfall-Runoff-Recharge Model



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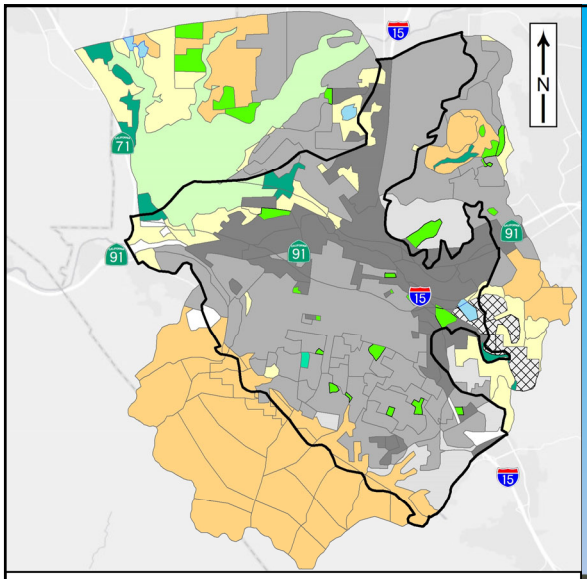

Recharge Polygons

- 286 polygons, which have been identified based on:
  - Areas where recharge occurs
  - Land uses that contribute to recharge
- Evolving land use
- Includes tributary watersheds
- Extends into southern Chino Basin

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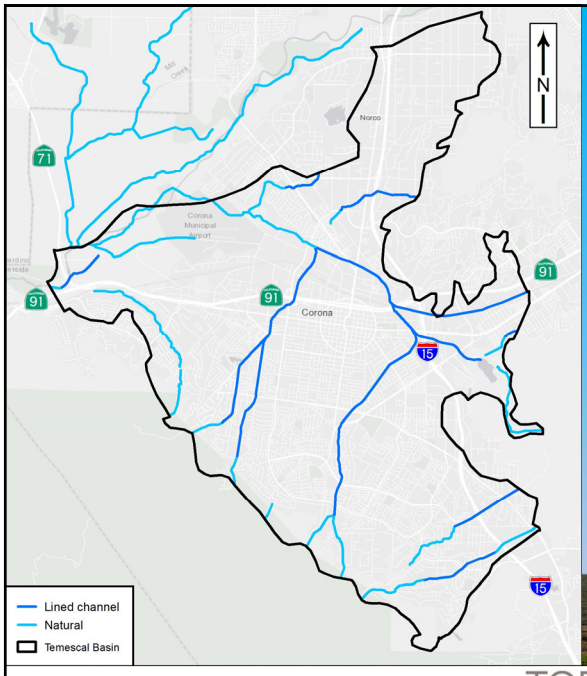

Stream Recharge

Stream Channel in Model

- Natural bed
- Cement-lined or pipeline

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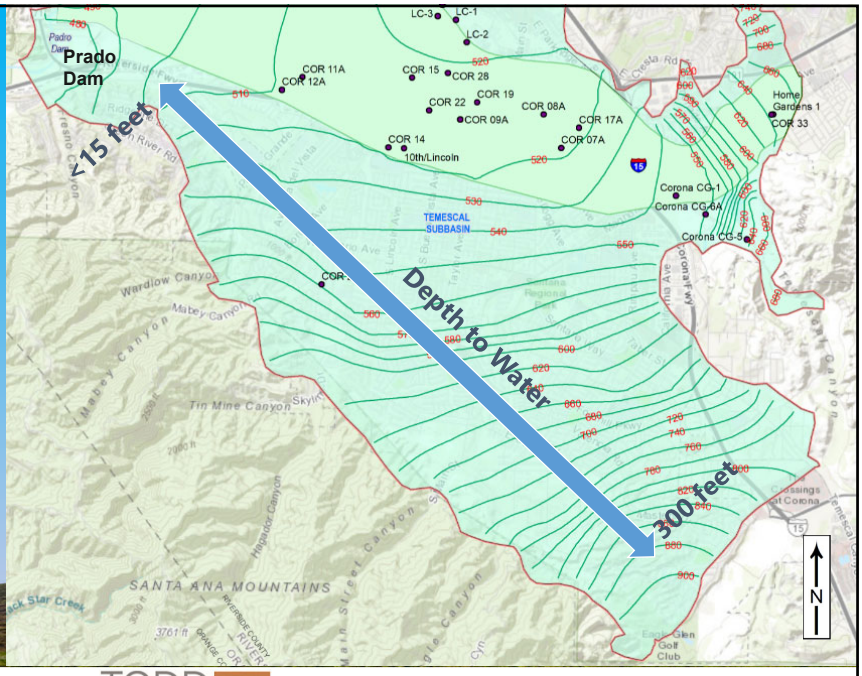
Stream Recharge

Stream channels are far above the water table

Percolation not affected by groundwater level except at Prado



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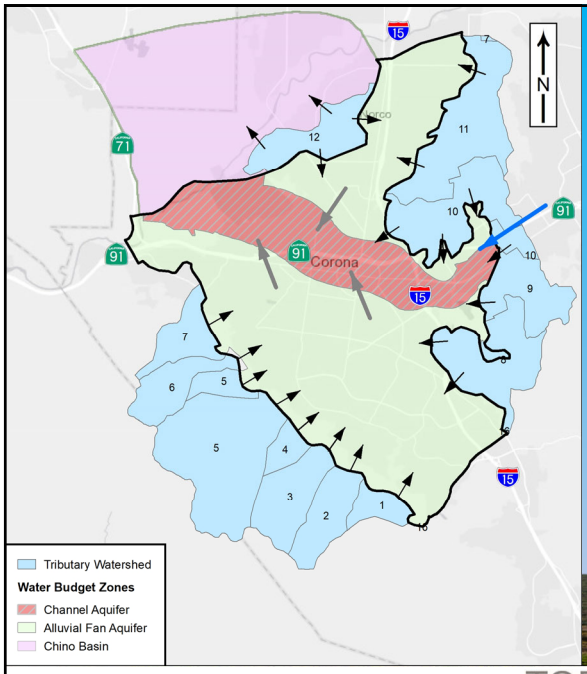
Subsurface Inflow/Outflow



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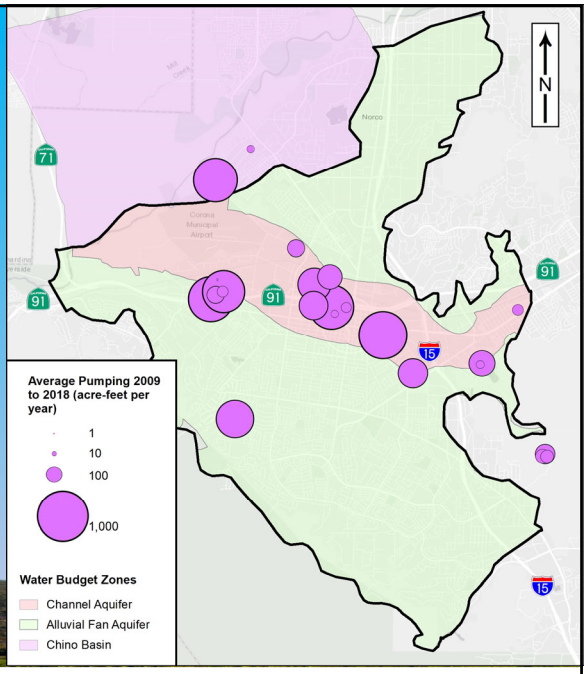
Groundwater Pumping

Concentrated in Channel Aquifer



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Water Budget Analysis Periods

- Three periods required by SGMA:
  - "Historical" = water years 1993 to 2007
  - "Current" = 2010 to 2013
  - "Future" = 1993 to 2017 (repeated twice)

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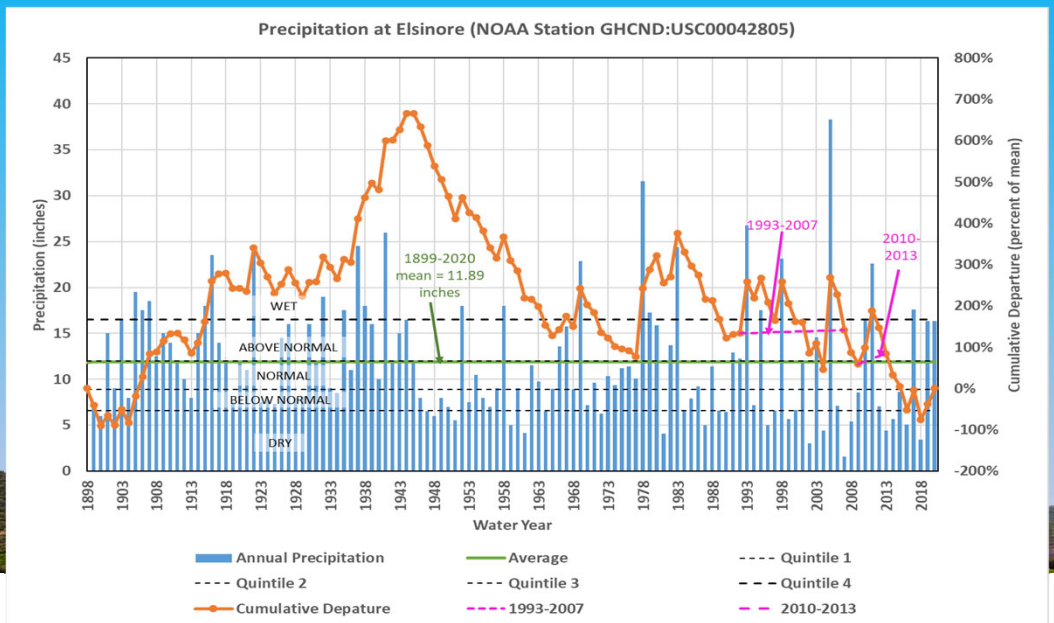
Water Budget Analysis Periods



Surface Water Budget

- Large volumes of water pass through the basin
- Inflows = outflows. No storage change.
- Creek channels mostly concrete-lined ➔ little percolation
- Creek channels mostly far above water table ➔ percolation rate not affected by groundwater level
- Prado wetlands is only area where groundwater and surface water interact

Groundwater Budget

- Quantitative results still under review
- General patterns:
  - Sources of recharge in descending order:
    - reclaimed water percolation,
    - Rain, irrigation, and pipe leaks
    - stream percolation, subsurface inflow
  - Yield of channel aquifer depends on inflow from alluvial fan aquifer area
  - Pumping is 60-75% of Basin outflow
  - Channel aquifer yield approximately current pumping. Increasing pumping will not increase yield.

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Discussion / Q&A

- What do you think the future of groundwater supply and demand will look like?

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Draft Projects and Management Actions

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Project Management/Action Groupings

Group 1 Baseline Actions

Existing or established commitments to projects/ actions

Group 2 Planned Actions

Developed and evaluated projects/ actions

Group 3 Potential Future Actions

Potential projects/ actions to achieve sustainability goals

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Group 1 Projects/ Management Actions

Description	Involved Agencies	Status
Groundwater Treatment: Treatment at the Temescal Desalter to reduce nitrates, TSS and TDS, and other contaminants of concern for the City's drinking water supply.	City of Corona	Ongoing
Water Reclamation Facility (WRF) Percolation Ponds: Discharge from City-owned WRFs to percolation ponds that recharge the Basin.	City of Corona	Ongoing
Water Level QA/QC: Activities to maintain reliability of ongoing groundwater elevation data.	City of Corona	Ongoing
Western Riverside County Regional Wastewater Authority (WRCRWA): This plant will soon produce recycled water for local irrigation use.	GSA, Jurupa CSD, and WMWD	Pending coordination with WRCRWA and partner agencies
Water Shortage Contingency Plans: Stages of water shortage and conservation response based on a City's available supply/deficit.	Cities of Corona and Norco	Ongoing
Water Conservation Programs: Response actions to reduce water use in stages of water shortage.	Cities of Corona and Norco	Ongoing
Western Municipal Water District IRWMP: Coordinated, long-range regional water quantity and quality management strategy.	10 local cities/agencies including the GSA	Ongoing
Santa Ana Watershed Involvement: Coordinated management group to protect the Santa Ana River basin and associated water resources.	GSA and Santa Ana Watershed Project Authority (SAWPA) members	Ongoing

Key
Project
Mgmt. Action

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Group 2 Projects/ Management Actions

Description	Involved Agencies	Estimated Cost	Status
Potable Reuse Feasibility Study: Study to look at use potential for near to future reclaimed water supply.	GSA	$150,000 to $200,000	Study initiation within second year of GSP adoption.
Mountain Runoff Capture Investigation: Runoff during storm events is collected into existing RCFCWCD basins to mitigate flooding. This study would explore options for operational changes to allow for additional benefit of groundwater recharge.	GSA and RCFCWCD	$75,000	Study initiation within five years of GSP adoption.
Interconnected Surface Water Monitoring Wells Implementation: Three shallow monitoring wells drilled into the Prado Management Area (MA) to allow for groundwater elevation monitoring.	GSA	$40,000 to $50,000	Implementation within first year of GSP adoption.

Key
Project
Mgmt. Action

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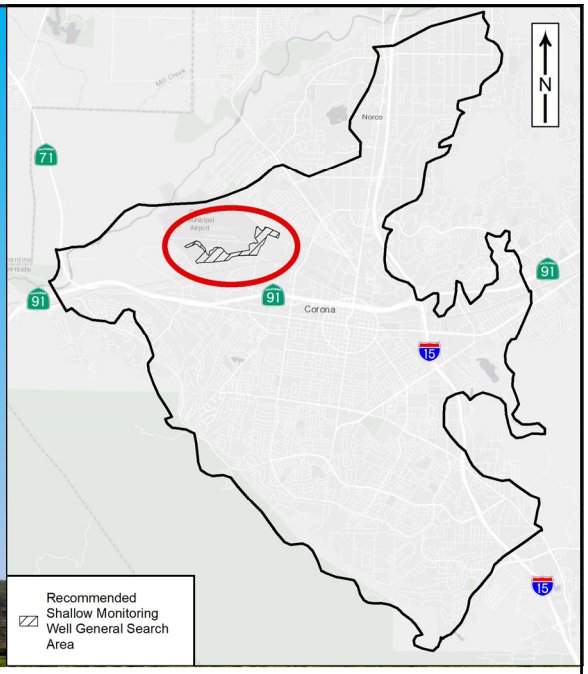
Group 2 – Monitoring Wells Project



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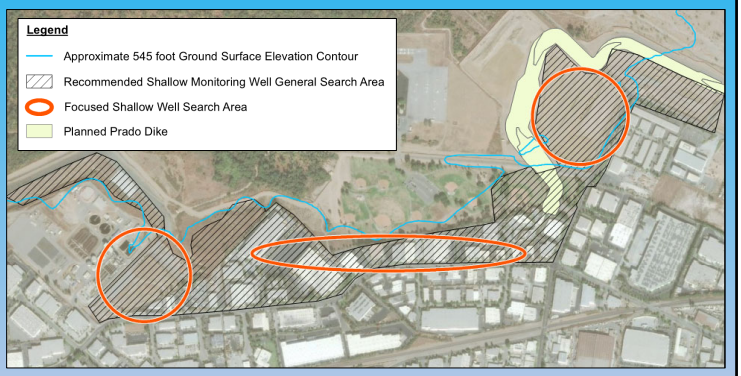
Group 2 – Monitoring Wells Project

- 3 wells, 40-60 feet deep
- Continuous groundwater elevation data collection
- Data to be incorporated in the 5-year GSP update
- Monitoring wells will inform future management actions in the Santa Ana River Watershed



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Group 3 Projects/Management Actions

Description	Involved Agencies	Status
Coordination with Upstream Santa Ana River Partners: Contingent on Prado MA monitoring well installation. If groundwater levels in the MA are falling, this approach will entail coordination with upstream partners for solutions.	GSA and Santa Ana Watershed Project Authority (SAWPA) members	No current anticipated timeline.
Future Groundwater Treatment: Implementation of advanced treatment to treat for previously detected PFAS as well as TDS, nitrate, and TCP.	GSA	No current anticipated timeline.
Urban Stormwater Treatment, Capture, and Recharge: Exploration of urban stormwater harvesting to offset water supply and/or provide for groundwater recharge.	GSA	No current anticipated timeline.

Key
Project
Mgmt. Action

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Discussion / Q&A

- Are there other potential groundwater related projects we should consider?
- Do you have ideas for how the volume of groundwater in the Basin could be increased?
- Do you have ideas for making groundwater more sustainable in the Basin?

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Public Outreach

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Public Workshop 3

- July 8, 2021, 4:00-6:00 PM
- Fact Sheet 3
- Please invite others!

TEMESCAL GSA

FACT SHEET 3

GROUNDWATER FOR PEOPLE, THE ENVIRONMENT, AND THE FUTURE

GET INVOLVED! Community input is needed! Visit CoronaCA.gov/Groundwater or send an email to Groundwater@CoronaCA.gov to attend a workshop, review draft chapters, and learn more!

To learn more about background information prepared for the GSP see Fact Sheet 2.

DEFINING SUSTAINABILITY AND TAKING ACTION

Now that the background information and modeling is complete, we will define groundwater sustainability for the Temescal Basin. Then, management actions and projects will keep us on course, so we have enough groundwater for current and future generations. This fact sheet gives more information of these important parts of the Temescal Groundwater Sustainability Plan (GSP).

WHAT IS SUSTAINABILITY IN A GROUNDWATER SUSTAINABILITY PLAN?

The Temescal GSP must include an overall goal that states the desired objectives and conditions for the Temescal Basin. That goal then helps define a sustainability framework to **avoid** lowering groundwater levels, reduction of storage, degraded water quality, surface water depletion, and land subsidence. The framework defines the concepts below, so that we will know if we need to take action to maintain sustainability:

1) **Undesirable results** are conditions we want to avoid in the Temescal Basin
2) **Minimum thresholds** set quantifiable measures for undesirable results
3) **Measurable objectives** establish quantifiable goals to maintain or improve groundwater conditions

Groundwater Dependent Ecosystems

GSPs must protect against surface water depletion. This is because surface water that is connected to groundwater is important for groundwater dependent ecosystems (GDEs). GDEs can include plants or animals that depend on groundwater. The Temescal Basin includes GDEs, primarily in the Prado Basin.

HOW CAN WE MAINTAIN SUSTAINABILITY?

With goals defined, we next turn to how we can meet the standards we have set! Management actions and projects help us maintain sustainability by managing the groundwater resource to avoid undesirable results. Some of the actions and projects that will be included in the GSP are already happening, some are planned and will be implemented within the next few years, and others are potential actions that will be taken in response to changing groundwater conditions in the Temescal Basin in the future.

Examples of Management Actions and Projects

CURRENT	PLANNED	POTENTIAL FUTURE
▸ Groundwater treatment ▸ Water Shortage Contingency Plans ▸ Water Conservation Programs	▸ Interconnected surface water monitoring ▸ Groundwater recharge feasibility studies	▸ Additional groundwater treatment ▸ Stormwater capture, treatment, and recharge

TEMESCAL GROUNDWATER SUSTAINABILITY PLAN

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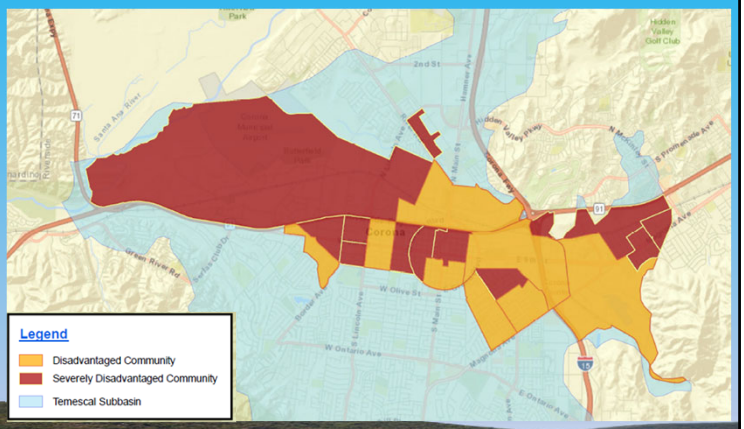
Community Leader Meeting

- Provide information on local water supply and learn about needs and perspectives in vulnerable communities



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Discussion / Q&A

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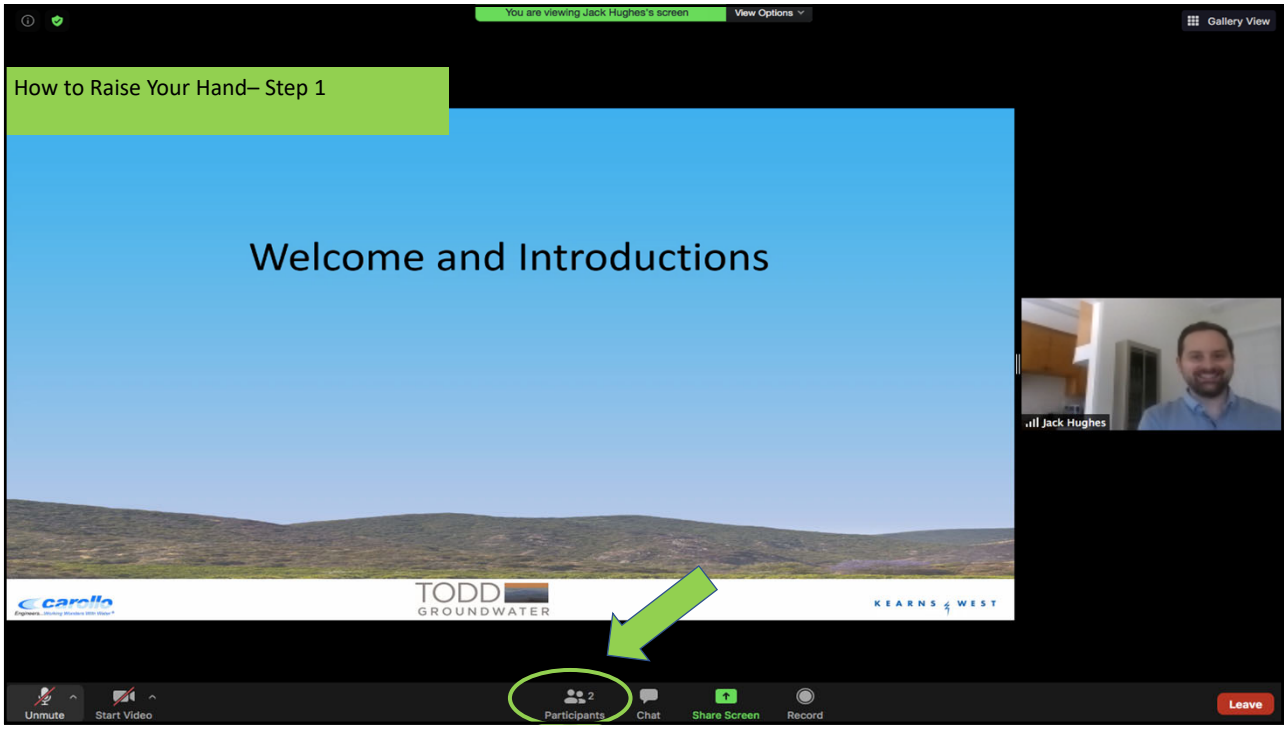
You are viewing Jack Hughes's screen
View Options
Gallery View
How to Raise Your Hand– Step 1
Welcome and Introductions
Jack Hughes
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Unmute
Start Video
2
Participants
Chat
Share Screen
Record
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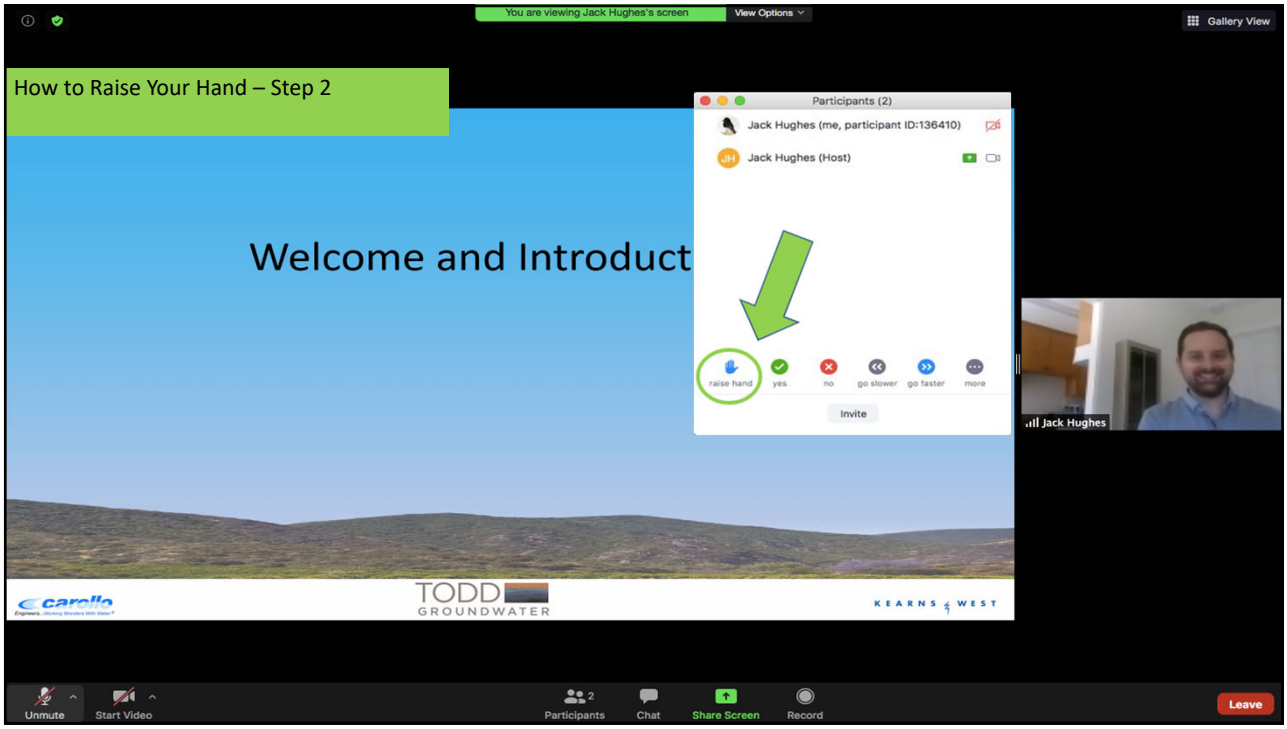
How to Raise Your Hand – Step 2
You are viewing Jack Hughes's screen
View Options
Gallery View
Participants (2)
Jack Hughes (me, participant ID:136410)
Jack Hughes (Host)
raise hand
yes
no
go slower
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Invite
Jack Hughes
Welcome and Introduct
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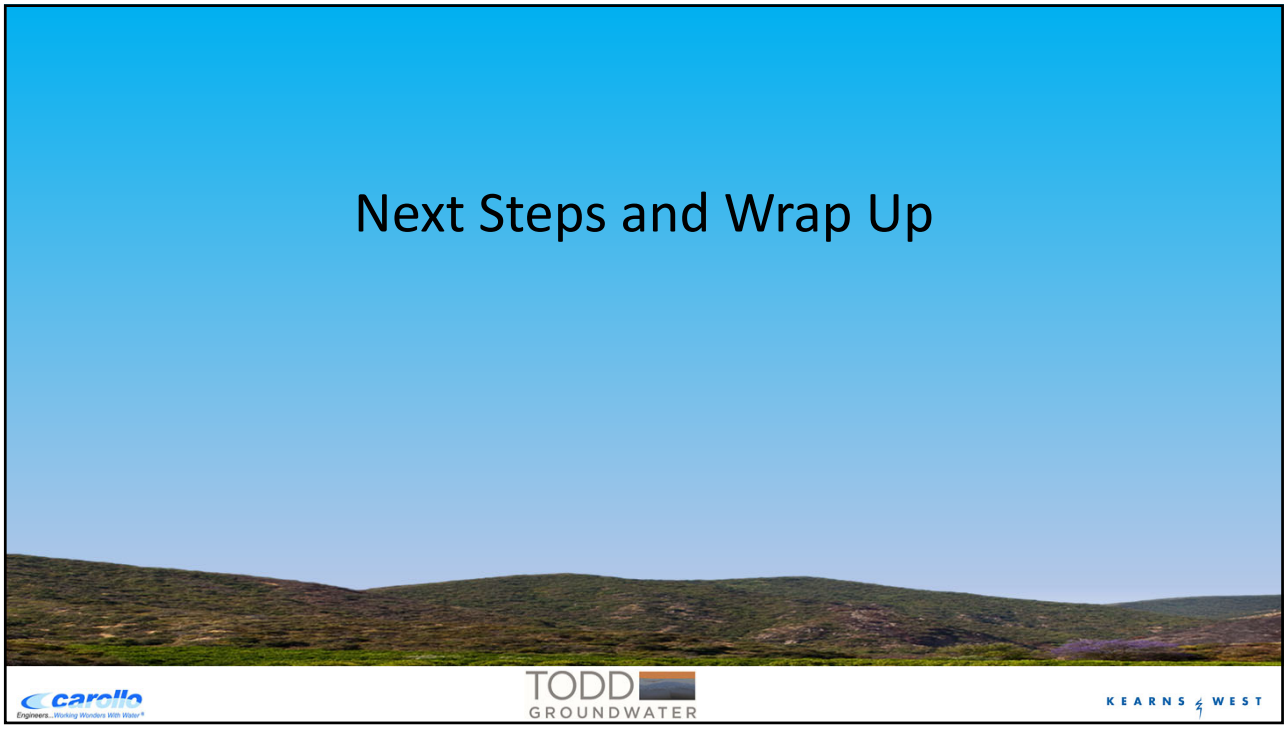
Next Steps and Wrap Up
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Next Steps

- Revise Chapters 1, 5, 6, 7, 8, and 9 based on GSA and TAC comments
- Compile complete GSP for public release
- Prepare for and hold Public Workshop 3 (July 8, 2021)
  - Zoom Link : https://zoom.us/j/93530179115
- Prepare for GSP finalization, adoption, and submittal to DWR
- Questions or comments to groundwater@coronaca.gov

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Thank You!

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APPENDIX G

Summaries of Public Workshops and Associated Fact Sheets

Temescal Basin Public Workshop 1

Workshop Summary

October 2, 2020

Home Gardens
County Water District
3832 N. Grant St., Corona, Calif. 92879
(951) 737-4741

Contents

1. Background

On September 16, 2014, the Governor of California signed into law a legislative package comprised of three bills: Assembly Bill (AB) 1739, Senate Bill (SB) 1168, and SB 1319. These laws are collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA (pronounced sigma) defines sustainable groundwater management as the "management and use of groundwater in a manner that can be maintained without causing undesirable results." This means keeping balanced levels of pumping and recharge of groundwater while assuring reliable water quality. SGMA provides a comprehensive framework for basin sustainability, additional technical analysis, and quantification of many aspects of basin sustainability and management. This includes extensive and detailed descriptions of the basin setting and conditions and more comprehensive monitoring of groundwater use, quality, and levels, including metering of groundwater usage.

SGMA requires the formation of a locally controlled Groundwater Sustainability Agency (GSA), which is responsible for developing and implementing a Groundwater Sustainability Plan (GSP). The GSP outlines how to achieve groundwater sustainability within 20 years of its adoption. The City of Corona, City of Norco, and Home Gardens County Water District have formed the Temescal Subbasin Groundwater Sustainability Agency (Temescal GSA) to create a GSP for the Temescal Basin.

GSAs must consider the interests of all beneficial uses and users of groundwater. The GSA must provide opportunities for public engagement and active involvement of diverse social, cultural, and economic elements of the population. The Temescal GSA recognizes that stakeholder and public engagement is critical to ensuring that the full range of interests of all beneficial uses and users of groundwater are represented during GSP development.

To share information and get input from stakeholders and the public, the Temescal GSA is holding a series of public workshops. The first public workshop, conducted on September 29, 2020, focused on communicating basic information about SGMA, the Temescal Basin, GSP development, and what sustainability means in a GSP. This summary documents the outreach methods, time and location, attendance, and major topics presented and discussed at the workshop.

2. Pre-Workshop Outreach

The Temescal GSA used a variety of methods to inform stakeholders and community members about the workshop and encourage participation, as shown in the table on the next page.

Table 1: Pre-Workshop Outreach Methods

Method	Description
Website	Workshop information was posted on the project website, hosted by the City of Corona's Department of Water and Power, and was included in a calendar post. The City of Norco and Home Gardens County Water District posted workshop information on their websites.
Social Media Posts	The City of Corona posted information about the workshop through a Facebook Event and on its Instagram and Twitter accounts. The City of Norco posted on its Facebook page.
Newsletters	The City of Corona advertised the workshop in its *Inner Circle* newsletter, which is accessible online and distributed via email.
Emails	Invitation emails were sent to those on the interested parties list.
Phone calls	Phone calls were made to community groups and stakeholder organizations to make them aware that the GSP was being prepared and to invite them to the public workshop.

3. When and Where

The workshop was held on September 29, 2020 from 4:00 to 5:30 p.m.

The workshop was held virtually on the Zoom platform. People also had the option to view and participate from the City of Corona Council Chambers. The workshop was streamed on the City of Corona's website, Facebook, and YouTube channels and on Corona TV, viewable on Channel 29 on Time Warner Spectrum and Channel 99 on AT&T.

4. Attendance and Social Media Views

Fifteen participants joined the Zoom meeting. Others viewed workshop on Facebook Live, YouTube, and Corona TV. Post-workshop statistics showed seventeen views on Youtube.

5. Summary

Welcome and Introductions

Jack Hughes, facilitator from Kearns & West, welcomed everyone to the first public workshop for the Temescal GSP. Christian Mendez from Kearns & West gave instructions in Spanish for accessing Spanish interpretation on Zoom. To begin the workshop, participants answered the following poll questions:

1. Where does the water in your tap come from?
    a. Local rivers and lakes
    b. Local groundwater
    c. Imported surface water

2. How much water comes from nearby sources?
    a. 0 to 20 percent
    b. 20 to 40 percent
    c. 40 to 60 percent
    d. 60 to 100 percent

After workshop participants responded to the poll, Chad Taylor, Senior Hydrogeologist at Todd Groundwater, discussed the answers. The water supply for Corona and Norco comes from local groundwater and is also imported. About half of the water delivered to Corona, Norco, and Home Gardens is imported and the rest comes from local groundwater sources. Next, participants watched a short video that showed how the City of Corona treats the groundwater it pumps at the Temescal Desalter and the Corona Ion Exchange Treatment Plant.

Hughes then invited the attendees to make introductions. Melissa Estrada-Maravilla, City of Corona Department of Water and Power Operations Analyst, introduced herself and thanked all for attending. Taylor then introduced the consultant team from Todd Groundwater, Carollo Engineers, and Kearns & West. Hughes next invited the attending stakeholders to introduce themselves in the Zoom chat and thanked them for being there as it is important to involve the many diverse communities and stakeholders of Corona, Norco, and Home Gardens to create a strong GSP for the Temescal Basin.

Introduction to Groundwater

Taylor provided a general introduction to groundwater (presentation slides for this and the following sections can be viewed in Appendix A). In many places, water is present between grains of soil beneath the surface. When there is a lot of space between grains of soil, there can be significant groundwater, also known as a groundwater aquifer. In some areas, there are connections between water on the surface and groundwater. A large area of connected groundwater is called a groundwater basin. Wells are the most common way to access groundwater. Well are used to pump water for different uses such as for city or agricultural uses. Some wells are small and shallow, producing only a few gallons of water per minute, while other wells are large and deep, producing thousands of gallons of water per minute.

Taylor showed a cross-section of an aquifer and described how groundwater gets there. Water enters the ground by soaking into soils from rainfall, streams, lakes, or other surface water. There are unconfined and confined aquifers. Water can enter the upper aquifer, called the unconfined or water table aquifer, from the ground surface or stream. A confined aquifer, however, sits below a layer of impermeable material. Most of the water in the Temescal Basin is in an unconfined aquifer system. Groundwater conditions change over time in response to increased pumping or decreased rainfall. Water level declines can lead to problems with wells not having access to water for pumping and can also cause problems for interconnected surface water, such as potentially reducing flow in streams and affecting plants and animals that rely on water.

Taylor discussed the importance of groundwater as a source of water in California. He compared the storage capacity of surface water reservoirs in California, totaling 50 million acre-feet of water, to a recent assessment of the storage capacity of groundwater basins. This capacity is estimated between 850 million and 1.3 billion acre-feet in the over 500 groundwater basins in California. Groundwater is important locally and statewide.

Discussion/Q&A

Hughes opened the floor for questions and comments. Participants were encouraged to answer the following questions: 1) What interests you about groundwater? and 2) Do you have questions or concerns about groundwater? Questions and comments from participants are summarized below.

- How is water cleaned?
- Why might water taste bad?
- Why does water taste different in different areas?
- Education on water use is important.

Introduction to the Sustainable Groundwater Management Act

Taylor presented the background and purpose of the SGMA. SGMA is California State legislation established in 2014 following a long period of state-wide drought. SGMA has altered how water is managed in California. It established requirements for state agencies to assess groundwater basin priorities and assign them as very low, low, medium, or high priority basins for sustainability planning. The Department of Water Resources (DWR) has designated the Temescal Basin as medium priority basin. SGMA gives local agencies guidance for how to assess sustainability. There is the option for the state to intervene if local agencies are not acting, but that is a last resort. There is also financial assistance in the form of grants available from the state. The Temescal GSA, comprised of the City of Corona, the City of Norco, and Home Gardens County Water District, has received a grant for plan preparation.

Taylor explained that SGMA establishes requirements and specifies deadlines for achieving and maintaining groundwater sustainability. These requirements include forming a GSA and preparing a GSP to facilitate local groundwater management informed by stakeholders. SGMA requires that groundwater basins designated as medium or high priority form GSAs and file GSPs by January 31, 2022. They must then demonstrate sustainable groundwater management by 2042. GSPs outline how to achieve sustainability based on SGMA guidelines. This includes ongoing monitoring and management, annual reporting of groundwater conditions, and updates to the GSP every 5 years.

Introduction to the Temescal Basin

Taylor reviewed the Temescal Basin, which covers most of the City of Corona, about half of the City of Norco, and the western part of the Home Gardens County Water District. The Temescal Basin is bounded by the Chino Subbasin to the north, the Riverside-Arlington Subbasin to the east, the Bedford-Coldwater Subbasin to the south, and the Coastal Plain of Orange County on the west. The Temescal Basin and surrounding basins are one connected hydrologic area that has historically been managed together. DWR has designated the Temescal Basin as medium priority due to significant reliance on groundwater supplies.

Taylor described the organization of the Temescal GSA. The Temescal GSA provides for decision-making, technical support, and outreach to the community. The City of Corona, the City of Norco, and